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17 January 1980

Worldwide Report

NUCLEAR DEVELOPMENT AND PROLIFERATION

No. 25



FOREIGN BROADCAST INFORMATION SERVICE

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NUCLEAR NATIONS FIRM ON STAND

Calcutta THE STATESMAN in English 7 Dec 79 p 1

[Text] New Delhi. Dec. 6.--Developing countries today tried to gain greater representation on the Board of Governors of the International Atomic Energy Agency. They felt that more funds should be diverted to promotional programmes. The nuclear weapons countries, however, made it clear that nuclear know-how would be available to the "have-nots" on their terms.

PTI adds: Canada today maintained its position that there would be no export of nuclear know-how and material to countries which did not accept international inspection of all nuclear installations.

At today's conference France denied reports that "stolen" uranium from its mines in Niger ended up in Pakistan.

Sir John Hill, chairman of the U.K. Atomic Energy Authority, has held out bright prospects for fast reactors which make possible the utilization of India's rich thorium resources for the atomic power programme.

Meanwhile, the American National Congress of South Africa today urged the Indian Government to expel the South African delegation from the country. The delegation was barred from participating in the 23rd general conference of the IAEA.

UNI adds: The Soviet Union would guarantee uninterrupted supply of nuclear fuel and take care of the waste storage for countries going in for nuclear power plants with Soviet assistance, Mr Ivan Morozov, chief delegate of the country, said today.

CSO: 5100

WORLDWIDE AFFAIRS

IAEA PAKISTAN DELEGATE DENIES REPORTS ON NUCLEAR BOMB

Only Propaganda

BK05114 Delhi Domestic Service in English 1530 GMT 5 Dec 79 BK

[Text] Addressing the [International Atomic Energy Agency] conference [in New Delhi] today the Pakistan delegate, Dr Munir Ahmad Khan, denied reports that his country is working on a nuclear bomb. He said this deliberate propaganda is a work of certain quarters who are keeping quiet over the reported explosion of a nuclear device by a country in southern Africa.

Conference Bars South Africa

BK051153 Delhi General Overseas Service in English 1000 GMT 5 Dec 79 BK

[Text] South Africa was today disallowed from taking part in 23d general conference of the International Atomic Energy Agency [IAEA] in New Delhi.

This followed yesterday's move from the Nigerian delegate who challenged the credentials of South Africa. The credentials committee examined the issue and favored disallowing South Africa from participating in the conference. The decision of the credentials committee was put to vote at the general council and approved by 49 countries, including India. It was opposed by 24 countries including the United States, Israel, Ireland, Italy and West Germany.

CSO: 5100

WORLDWIDE AFFAIRS

INDIAN DELEGATE SPEAKS AT IAEA MEETING

BK071515 Delhi ISI Diplomatic Information Service in English 1442 GMT
7 Dec 79 BK

[Speech by "Indian delegate," not further identified, at the International Atomic Energy Association meeting in Delhi--date not given]

[Text] "The question of the establishment of a nuclear weapon free zone in South Asia was referred to on December 6 by one of the speakers in the general debate. The general question of the establishment of nuclear weapon free zones in various regions of the world was the subject of a comprehensive study undertaken by a United Nations group of experts. The most important and basic principle enunciated in that study was that the initiative for the creation of a nuclear weapon free zone should come from the states within the region concerned and that participation must be voluntary. This principle was reiterated in the final document adopted by consensus by the special session of the UN General Assembly devoted to disarmament held in 1978 where it is clearly stated that the establishment of nuclear weapon free zones should be on the basis of arrangements freely arrived at among the states of the region concerned. The Indian Government attaches great importance to this principle because we believe that for a zone to be viable it should come into being as a result of the initiatives taken jointly by the states concerned and should not be imposed on them. Reference has also been made to the question of safeguards in the context of proliferation. If international verification through safeguards is to be meaningful it cannot be confined to selected groups of nations or to particular geographical areas. It must apply universally to all nations and to all parts of the world. I should also like to take this opportunity to recall our prime minister's reference to India's nuclear programme in the course of his address last Tuesday [4 December] when he stated 'we have never deflected from our commitment to the peaceful uses of nuclear [energy].'"

CSO: 5100

WORWIDE AFFAIRS

U.S. URANIUM TO GO TO INDONESIA REACTOR

Calcutta THE STATESMAN in English 8 Dec 79 p 1

[Text] New Delhi, Dec. 7.--An agreement for the supply of enriched uranium by the USA to Indonesia's Triga research reactor at Bandung was signed here today.

Mr Sigvard Eklund, Director-General of the IAEA, Mr Hariono Nimpuno, resident representative of Indonesia to the IAEA, and Mr Lous Nosenzo, Deputy of the U.S. Assistant Secretary of State for Nuclear Energy Affairs, signed the agreement.

The fuel to be provided consists of 18.33 kg of 20% enriched uranium. Earlier supplies of the fuel were transferred to Indonesia by the USA through the IAEA under the first and second agreements concluded in 1969 and 1972.

At today's session a number of delegates accused the Agency of wasting funds on regulatory rather than promotional activities. They alleged that the Agency was indifferent to the requirements of the Third World.

Many countries, which unlike India, are signatories to the Nuclear Non-Proliferation Treaty and are capable of getting assistance from the Agency also criticized the organization.

Concern

The leader of the Nigerian delegation told the conference: "We of the developing nations, are watching with concern the nuclear powers' sledge-hammer-method of dealing with us in regard to nuclear technology. All sorts of measures have been introduced to deprive us of the extensive use of sensitive technology, so that it will not spread beyond the few who are already having it."

He said it was a matter of "regret" that the means of nuclear technology had been transferred to the "apostles of apartheid" in South Africa.

Like Nigeria, the Libyan delegation drew attention to the South African expulsion. It accused the IAEA of having failed to investigate reports of possible South African Israeli "collusion." On the contrary, the Agency "is still providing Israel with technical assistance," it said.

Israel praised the organization for its role in offering technical assistance to member States. Several delegates, including those from Iraq, Morocco and Libya, walked out of the conference hall when the Israeli delegate took the floor.

The Israelis were not invited to the Prime Minister's reception to the delegate nor were they invited to visit the Bhaba Atomic Research Centre in Bombay.

The conference will meet again on Monday.

C30: 5100

INDIA ASKS UNITED STATES FOR FUEL FOR TARAPUR

Calcutta THE STATESMAN in English 7 Dec 79 p 14

[Text] New Delhi, Dec. 6.--India yesterday asked the USA to fulfill its obligation to provide enriched uranium for the Tarapur plant. The contract for the supply of fuel was signed by the two countries more than a decade ago, but the USA, following a local enactment, has been dragging its feet for the past year.

The U.S. Nuclear Regulatory Commission has not cleared two overdue supplies of enriched uranium till now.

The Tarapur plant is right now operating at between 60% and 80% of its capacity and, should the supplies arrive on time, it can work to full capacity. India plans to take a firm stand on the American refusal to fulfill contracted obligations. It obviously does not propose to be black-mailed into signing the nuclear nonproliferation treaty, nor is it going to accept one-sided safeguards suggested by the International Atomic Energy Agency.

India is to tell the USA that a domestic legislation cannot and should not affect agreements entered into by two countries. This would violate the Vienna treaty governing such agreements.

The Chairman of the Indian Atomic Energy Commission, Mr Sethua, is believed to have urged the leader of the U.S. delegation attending the general conference here of the IAEA, Mr Gerald C. Smith, to ask his Government to fulfill its contracted obligations. India does not accept the doubts being expressed in the U.S. Regulatory Commission about the country's intentions. New Delhi has stated officially its intentions not to go into the weapons sphere.

As pointed out by Pakistan at yesterday's meeting of the IAEA, India, like most other developing countries, cannot accept patently one-sided decisions on the Indian question. Should the USA refuse to supply the required uranium, the scientists are sure that it can be produced locally.

WORLDWIDE AFFAIRS

INDIA REJECTS PAKISTAN PROPOSALS FOR NUCLEAR-FREE ZONE

BK071141 Delhi Domestic Service in English 0830 GMT 7 Dec 79 BK

[Text] India has rejected Pakistan's proposals for a nuclear weapon free zone in South Asia saying that it would come into being as a result of the initiatives taken jointly by the states concerned and should not be imposed on them.

Addressing the conference of the International Atomic Energy Agency in New Delhi today, the Indian delegate, Mr K.R.P. Singh, said India attaches great importance to the principle adopted at the United Nations General Assembly disarmament session last year. It was clearly stated that the establishment of a nuclear-free zone should be on the basis of arrangements freely arrived at among the states of a region concerned.

On the question of safeguards raised by Pakistan, in the context of proliferations, Mr Singh emphasized that if international verification to safeguards is supposed to be meaningful it can not be confined to selected groups of nations or to particular geographical areas. He reiterated India's commitment to the peaceful uses of nuclear energy.

CSO: 5100

WORLDWIDE AFFAIRS

CHARAN SINGH OPENS ATOMIC ENERGY CONFERENCE IN NEW DELHI

Twenty-third Session

BK041007 Delhi ISI Diplomatic Information Service in English 0906 GMT 4 Dec 79 BK

[Text] Opening the 23d session of the International Atomic Energy Agency's [IAEA] general conference in New Delhi on 4 December Prime Minister Charan Singh proposed that the IAEA consider imposing safeguards on noncivilian nuclear establishments and prepare a long-term plan to help developing countries utilize benefits of nuclear energy for national development, reports PTI.

He suggested that a treaty should be formulated to prohibit use in war of nuclear weapons "a crime against humanity" as a precursor to nuclear disarmament.

Pointing out that obstacles were being put in the name of nonproliferation to prevent developing countries from evolving indigenous facilities for peaceful use of atomic energy he added there were even moves towards institutional measures at limiting certain nuclear fuel cycle activities to a few so-called safe and secure locations.

He complained that the technical assistance being provided by IAEA was being subjected to restrictive and preferential preconditions and demanded that it reverse this trend.

Reminding the conference that the world today was at the crossroads in the history of development of atomic energy, the prime minister said there was on the one hand an unprecedented threat of self-extinction on account of the arms race and on the other, an increasing need to develop nuclear power to meet the energy crisis.

The prime minister reiterated India's belief in the concept of genuine and comprehensive nonproliferation and its view that nonproliferation measures to be truly effective must be applied uniformly and universally to all nuclear activities in all states. In practice he said "we find that while various measures have been initiated to check the possible spread of nuclear weapons we are yet to witness a single significant step to even slow down let alone stop or reverse the far more dangerous and absolutely irrational nuclear arms race that it actually going on. I am convinced that we cannot expect any progress in one without corresponding progress in the other."

It was even more distressing that many who preached the virtue of horizontal nonproliferation claim in the same breath their right based on the theory of nuclear deterrence

not only to possess but even to use nuclear weapons to safeguard national security. In the name of nonproliferation smaller nations were forced to accept restraints and restrictions, none of which the nuclear weapons powers are prepared to accept for themselves.

Noting that India had been in the field of nuclear energy for over three decades, he said Indian experience would vindicate that developing countries need not follow the path traversed by advanced countries for application of science to society. They could jump certain stages of technological development.

The prime minister noted that direct benefits of the Indian atomic energy programme were more profound and of immense significance. The contribution made by Indian programme had helped the generation of what he called a national scientific culture.

Earlier H.W. Sethna, chairman of Indian Atomic Energy Commission, was elected president of conference.

IAEA Director Addresses Conference

BK050926 Delhi ISI Diplomatic Information Service in English 0900 GMT 5 Dec 79 BK

[Text] Doctor Sigvard Eklund, director general of the International Atomic Energy Agency, justified in an indirect way India's claim for uninterrupted fuel for the Tarapur atomic plant from the U.S., reports PTI [PRESS TRUST OF INDIA].

Addressing the 23d general conference of IAEA in New Delhi on December 4 Doctor Eklund said "When a country, particularly a developing country, invests resources of the order of a billion dollars in a nuclear power plant and is prepared to accept NPT or comparable safeguards, it was legitimate for it to expect uninterrupted supply of fuel during the lifetime of the plant."

Doctor Eklund also made an indirect reference to Pakistan's effort to enrich uranium. He said, "We cannot disguise our concern about the reports of the spread of unsafeguarded enrichment technology."

President Jimmy Carter, in a message to the IAEA conference, called for "urgent efforts" to develop nuclear energy to reduce dependence on "dwindling and sometimes insecure fossil fuel supplies," reports UNI [UNITED NEWS OF INDIA].

CSO: 5100

WORLDWIDE AFFAIRS

CUBAN DELEGATION ADDRESSES UN ATOMIC ENERGY MEETING IN NEW DELHI

PL101914 Havana Domestic Service in Spanish 1700 GMT 10 Dec 79 FL

[Text] New Delhi--Today at the International Atomic Energy Agency Cuba stressed the danger for the peoples struggling for their independence and sovereignty of the possible nuclear explosion carried out recently by South Africa. Dr Fidel A. Castro Diaz, head of the Cuban delegation to the 23d general conference of this organization which is subordinate to the United Nations, stated that it is necessary to intensify the efforts of the International Atomic Energy Agency to prevent nuclear weapons from getting into the hands of those who could endanger world peace. Castro Diaz also stressed Cuban support for the strategic arms limitation agreement between the United States and the USSR. He said that this spirit of detente should also be extended to other regions of the world. The head of the Cuban delegation added that it is necessary that the deployment of force and the threats and provocations which at this time are occurring mainly in the Caribbean region, the Arabian Gulf, the Indian Ocean and Southeast Asia cease at once.

Castro Diaz mentioned the need for international cooperation so that those countries in particular which lack energy resources can undertake nuclear development [programs]. He also repeated that nuclear arms are not the maximum desire of any country that proposes to learn and improve on the various uses of atomic energy for their development. Only a rational and planned use of scarce resources, which is what the majority of these countries have, would justify the great investment required by nuclear [energy] programs. In this context the head of the Cuban delegation recalled the remarks of Fidel Castro, president of the nonaligned countries movement, at the 34th UN General Assembly session in which he said that the problems of the world cannot be resolved with nuclear weapons.

Dr Fidel A. Castro Diaz added that the Cuban delegation favors increasing the resources of the International Atomic Energy Agency to finance nuclear programs for underdeveloped countries and proposes that the voluntary contributions to the fund of this organization could also be used to provide services of specialists to those countries with scarce resources.

In addition, the Cuban nuclear physicist stated that the economic development objectives of his country establish the need for a substantial increase in its capacity to generate electric energy. Castro Diaz stated that our limited conventional fuels requires that Cuba set up a nuclear energy development plan. At this moment the preparatory tasks are underway to begin construction of the first nuclear generating plant in the central-south region of Cuba. At the same time he added that Cuba is drawing up an agreement on safeguards with the International Atomic Energy Agency for that nuclear generating plant. Lastly, Castro Diaz added that Cuba, along with the rest of the peace-loving countries, will continue working so that the use of atomic energy always serves the well-being and development of our peoples and not their impoverishment or destruction.

ARGENTINA FOLLOWS INDIA'S EXAMPLE

Madras THE HINDU in English 8 Dec 79 p 7

[Text] New Delhi, Dec. 6. Argentina has followed India by withdrawing from the regular technical assistance programme of the International Atomic Energy Agency.

Mr Carlos Castro Madero, Argentina's delegate to the IAEA conference, today said his country did not want the assistance from 1980. India had withdrawn from the technical assistance programme this year.

He said Argentina was withdrawing, because the level of assistance provided did not meet the needs of his country.

He said his country would, however, continue to supply experts to the IAEA and increase its voluntary contribution.

Australia announced its plan to build a multi-nation commercial uranium enrichment facility industry.

Its delegate to the conference, Mr D. W. George, said his Government was fully conscious of the non-proliferation and safeguards issues raised by uranium enrichment but was setting up the plant to process Australian raw materials prior to export.

Mr George said his country was concerned about the construction of unsafeguarded facilities in some countries and urged all member-States to accept fullscope safeguards.

Saudi Arabia's Plan

The oil-rich Saudi Arabia declared it would conserve its petroleum resources, and go in a big way to develop nuclear power for desalinating sea water.

"We import water at a cost sometimes higher than your imported oil," the Saudi delegate, Mr Fadhil K. Al-Kabbani told the conference, and asked for IAEA assistance in nuclear desalination.

He said his country was helping industrialised countries with oil, and "it is the duty" of these countries to help Saudi Arabia with nuclear energy.

The African National Congress of South Africa urged India to immediately expel from the country, the South African delegation which had been barred from participating in the general conference.

In a statement, Mr S. Molifi, chief representative of the ANC, said that the United States, West Germany, Britain, France and Israel which had been "overtly and covertly helping the South African white minority regime in its nuclear plans have unmasked themselves by advocating the racist delegation's participation in the conference on flimsy grounds."

He praised the Indian Government for its decisive role in barring South Africa's participation in the conference as also the initiative taken by the Nigerian and other African delegations.

An agreement for supply of enriched uranium by America to Indonesia was signed during the day. Under the agreement, 18.22 kg of 20 percent enriched uranium will be supplied by the U.S. for the Triga research reactor at Bandung.

The agreement was signed by the IAEA chief, Dr Sigvard Eklund and Mr Marlono Iimpuno of Indonesia and Mr Louis Nosenzo of the U.S.--PTI and UNI.

CSO: 5100

FRENCH BANK SEEKS INVOLVEMENT IN AUSTRALIAN URANIUM

Canberra THE WEEKEND AUSTRALIAN in English 3-4 Nov 79 p 16

[Report from Stephen Calder]

[Text]

SOCIETE Generale, the French bank which ranks seventh largest in the world, is seeking equity in Australian natural resource projects and would like particularly to be involved in uranium.

Direct equity in such projects would be unusual for a bank, especially one of the size and international standing of Societe Generale.

Its eagerness to be involved in uranium projects at this level is a measure of France's desperate need to diversify its sources of uranium, which now comes mostly from Africa, with some small local production.

The general manager of Societe Generale worldwide, Mr Marc Vienot, is in Australia to examine the group's newly-acquired interests here and to talk with the Foreign Investment Review Board and the Campbell Committee.

In August, the French bank announced it was buying a 50 per cent stake in local financier Trade Credits, a move which is still awaiting approval from the FIRB.

It also announced plans to set up a merchant bank here. It is envisaged that the bank would be an equal joint venture by Trade Credits and Societe Generale, which would give Societe Generale a 75 per cent stake in the venture.

Talks with Canberra officials will be aimed at discovering how this can best be done.

In an exclusive interview with *The Financial Australian* last week, Mr Vienot indicated that like many other foreigners in the field his bank would ideally like to be more strongly represented here.

"The clearest way would be to apply for a commercial banking licence. But in reality it may be very different. The Campbell Committee may take some time to make its recommendations, and it is not known how these will be implemented.

REVAMP

"How long all this will take cannot be prejudged."

Nevertheless, Societe Generale has made its voice heard at the Campbell inquiry through a confidential letter to the committee. This will be followed up by a more detailed public submission at the request of Mr Keith Campbell.

The bank is well aware that those who already have operations here will be among the front-runners should licences ever be handed out to foreign banks — hence the move to establish an Australian operation. Meanwhile, if FIRB approval is forthcoming, Trade Credits will get a revamp — with credit lines from France to give it solid financial backing.

Its real estate leasing and consumer credit activities can be developed with French expertise and money, Mr Vienot said.

And the planned merchant bank's speciality will be big-ticket leasing — or leverage leasing as it is called here — a form of resource project finance already used in Australia to a limited extent.

It is a method of financing large projects in such a way that the assets are owned by the financier and leased back to the developer. Societe Generale used this method as

long ago as 1909 to finance a chloride plant and, more recently, a \$60 million sugar refinery in France.

The bank has also used it to finance aircraft — in fact, the bank owns about 25 Boeings which are rented back to airlines.

More sophisticated and comprehensive project finance, as well as equity in Australian resource projects are Societe Generale's main areas of interest here.

PROMISING

But it first wishes to attain its initial objective of widening the channel of relations between French and Australian industrial groups, said Mr Vienot, a former World Bank director and French Government representative to the International Monetary Fund.

As Societe Generale's Australian adviser, Sir Davis Hughes, pointed out during the interview, the bank recognises Australia's need for maximum local development of processing industries so that the export of end-products rather than raw materials can be emphasised.

Where uranium is concerned, "we hope we can be involved at any stage — even shares in capital," Mr Vienot said.

"This sector is a very promising one and Australia, to put it in banking terms, is a good risk.

"There are affinities in our political systems, which give us confidence and which could lead us to take a large exposure to banking risk vis-a-vis Australia.

"We would like to have a more permanent and active position here; so far we are not well represented in South East Asia.

As could be expected of a bank of Societe Generale's size, it has an impressive network of representation throughout the world. Mr Vienot emphasised its well-established Middle East connections.

"We believe we can bring something to the Australian picture in the interest of French and Australian corporations," Mr Vienot said.

IRANIAN STAKE IN EUROPEAN URANIUM PLANT FROZEN

NO050715 Paris AFP in English 0708 GMT 5 Dec 79 NC

[Text] Paris, Dec. 5 (AFP)--Iran's 10 percent stake in the European Eurodif plant intended to produce enriched uranium has been frozen at the company's request, following Iran's decision not to go ahead with its nuclear power program, reliable sources said here. Difficulties between Iran and Eurodif arose in June when Iran ceased paying its share of joint investment costs totalling some \$5 billion for construction and development of a uranium enrichment plants.

In addition, Iran has cancelled orders for nuclear plants placed in West Germany and France, the sources noted.

It was clear from this Iran would not fulfill its commitment to take 10 percent of production from the new Tricastin enrichment plant from 1981, they said. This development is expected to affect the profitability of the plant as by 1982 it is scheduled to produce enough enriched uranium to supply about 100 power stations--far more than the market will need for some years because of a slowdown in nuclear power programmes in several countries.

Eurodif, which has made no comment on the matter, obtained a Paris court ruling in October freezing the Iranian holding until a compromise solution is found.

CSO: 5100

WORLDWIDE AFFAIRS

WESTERN CORPORATIONS SOUTH AFRICA COOPERATE IN NUCLEAR SPHERE

LD031508 Moscow Domestic Service in Russian 1030 GMT 3 Dec 79 LD

[Text] The trip by the South African foreign minister to Western Europe is being viewed in African countries as yet another step along the road of strengthening ties between the Western imperialist circles and the racist regimes in the south of Africa. Our correspondent in the countries of East Africa, Georgiy Voytsekhovskiy, reports from Dar es Salaam. [Begin Voytsekhovskiy recording]

The leadership of the African National Congress has said that an attempt by monopolistic capital to increase the viability of the regimes in Salisbury and Pretoria is behind this visit. If one turns to the facts, one cannot fail to see that in the past few years a steadfast intensification in the cooperation between Western monopolies and the South African racists has been taking place. Over a period of 9 years, foreign investments in the RSA have almost quadrupled. Several hundred transnational corporations have been actively operating there. These are the U.S. General Motors, the British Imperial Chemical Industries, the West German BMW, Bosch, Siemens and Messerschmitt and also IBM and many more. These gigantic corporations not only get incredible profits in the Republic of South Africa but they also purposefully help the racist regime to set up a military-industrial complex. According to their licenses and technology, the Republic of South Africa produces the most up-to-date types of arms and weaponry: infantry weapons, tanks, armored carriers, naval vessels, missiles and fighter planes. These include the modified U.S. Lockheed plane and the French Mirage capable of carrying missiles, West German and French missiles of the air-to-air and ground-to-air class, and Belgian and Israeli submachine guns and rifles.

The nuclear sphere occupies a special place in the cooperation between the West and the racists. With the assistance of corporations from the United States, Britain, the FRG and France, the Pretoria regime has been given access to nuclear weapons and as a recent test of a nuclear device in the Kalahari Desert demonstrated, the racists have started to create their own nuclear potential.

As is evident, the ties between Western monopolies and racist regimes are developing along a growing line and the South African foreign minister's new round of talks in Western Europe is an organic, component part of this process. This is why the African peoples advocate the most resolute measures aimed at stopping the criminal ties between the West and racist regimes. [end recording]

CSO: 5100

WESTERN PRESS PLAYS DOWN SOUTH AFRICAN NUCLEAR TEST

LD271822 Moscow TASS in English 1615 GMT 27 Nov 79 LD

["Tale-Telling Silence"--TASS headline]

[Text] Moscow, November 27. TASS--The LITERARY GAZETTE criticizes the Western press for its biased attitude to news-covering concerning the explosion of South Africa's nuclear device. Although this event was widely attentioned, the newspaper says, it is very important not only what was said but also how it was said. It is obvious that the way it was reported was designed to lull public opinion, to mislead it. With this aim in view the newspapers had been adding for a whole month sleeping drugs to objective reports. It was said, for instance, that the explosion had a low yield--only fifteen per cent of the yield of the bomb explosion in Hiroshima. It was also reported that American reconnaissance planes failed to detect high radiation levels in the area of the explosion... And finally, with visible pleasure, they seized upon a story that a "Soviet submarine ran into trouble off the shores of South Africa" but nothing came out of it...

"In New Zealand, thousands of kilometres away from the South African shores, radioactive fallout was registered. When analysed, it proved to be the result of the explosion of a nuclear bomb," the LITERARY GAZETTE goes on. The same report said the radioactive contamination was not above danger level. So there is no reason for the New Zealanders to worry.

But what about the population of South Africa itself and the peoples of neighbouring countries who live next door to the fascists who have come into possession of nuclear arms? And what about those who are plying sea lanes in the Atlantic and Indian oceans, thus exposing themselves to the danger of contamination from a different--danger--level? There are no answers to these questions. Beginning with November 14, the day when radioactive fallouts were reported in New Zealand, the Western colleagues have been silent. Nor anything is heard from them about a "Soviet submarine". A tale-telling silence, isn't it?

CSO: 5100

WORLDWIDE AFFAIRS

BRIEFS

ARGENTINE PURCHASES USSR ROLLING MILLS--Buenos Aires, 3 Dec (AFP)--The Argentine National Atomic Energy Commission (CNEA) has purchased three cold rolling mills to produce seamless tubes for its nuclear plants, according to information released here today. According to this information, the deal falls within the framework of Argentine-Soviet trade agreements, and the CNEA purchased the rolling mills from the Mashinokспорт enterprise. One of these rolling mills is currently being assembled in Buenos Aires under the advice of Soviet engineers. It will produce tubes from 12 to 32 millimeters in diameter to supply the needs of the Argentine nuclear enterprise. [Excerpt] [PY031432 Paris AFP in Spanish 1230 GMT 3 Nov 79 PY]

CEMA NUCLEAR ENERGY COOPERATION--The 37th session of the CEMA Permanent Committee for Peaceful Uses of Nuclear Energy ended in Drzonkow near Zielona Gora on 23 November. The session, which was attended by state delegations from Czechoslovakia, Bulgaria, the GDR, Poland, Cuba, Romania, the Socialist Republic of Vietnam, Hungary and the USSR and by a representative of Yugoslavia, adopted draft agreements and programs concerning cooperation of CEMA countries on problems of nuclear energy included in the long-term outline program for cooperation in the sphere of energy, fuels and raw materials. It also approved the cooperation program in the sphere of controlled thermonuclear synthesis. [Warsaw TRYBUNA LUDU in Polish 24-25 Nov 79 p 4 AU]

CSO: 5100

INTER-ASIAN AFFAIRS

INDIA REJECTS PAKISTAN NUCLEAR FREE ZONE

Madras THE HINDU in English 8 Dec 79 p 1

[Text] New Delhi, Dec. 7. India today rejected Pakistan's proposal for a nuclear weapon free zone in South Asia and said such a zone should come into being as a result of the initiatives taken jointly by the States concerned.

The proposal cannot be imposed on India.

Addressing the International Atomic Energy Agency (IAEA) conference here, India's delegate Mr K. R. P. Singh recalled that the general question of establishing nuclear weapon free zones in various regions of the world had been the subject of a comprehensive study undertaken by a United Nations group of experts.

The most important and basic principle enunciated in that study was that the initiative for the creation of a nuclear weapon free zone should come from the States within the region concerned and that participation must be voluntary.

This principle, the Indian delegate reminded the conference, was reiterated in the final document adopted by consensus by the special session of the U.N. General Assembly devoted to disarmament held last year. It was clearly stated that establishment of nuclear weapon free zones should be on the basis of arrangements freely arrived at among the States of the region concerned.

Mr Singh, who is India's Ambassador to Austria, told the conference, "My government attaches great importance to this principle."

The Indian statement to the conference largely related to the agency's technical assistance and safeguards activities.

Mr Singh pointed out that nuclear energy offered the only viable alternative source of energy and expressed concern at the IAEA's thrust to achieve "limited non-proliferation objectives at the risk of hampering peaceful nuclear activities."

The offers of some nuclear weapon States (the U.S., Britain and France) to bring some of their civilian nuclear facilities under the agency's safeguards provisions was dismissed by him as "largely cosmetic gestures."

Limited safeguards activities "serve no realistic purpose," he said.

The existing stockpiles of nuclear weapons posed a "far greater risk to the survival of mankind than the consequences of horizontal proliferation," he said.

Rejecting international verification through safeguards, Mr Singh said, "It cannot be confined to selected groups of nations or to particular geographical areas," India wanted international verification to apply "universally to all nations and to all parts of the world."

India also expressed concern at the "disturbing" trend toward discriminatory acceptance of the IAEA's safeguards inspectors by various States.

Certain States have been rejecting inspectors on considerations "which we regard as totally extraneous," Mr Singh said, and warned that this would make these States take reciprocal actions leading to strained bilateral relations.

Norms for IAEA Aid

Such discriminatory acceptance, India pointed out, would create a vicious cycle which would also pose severe administrative problems for the agency and possibly result in additional expenditure caused by the necessity of maintaining a larger number of inspectors.

Mr Singh said India also "regrets" that the newly-adopted guiding principles and general operating rules to govern the provision of technical assistance by the agency included principles which, "in our view, are discriminatory and not in conformity with the statute."

The revised guidelines attached conditions to the provision of technical assistance through formulations derived from a discriminatory treaty and simultaneously imposed progressive restrictions on peaceful activities.

In these circumstances, India had declared that "it shall no longer be interested in receiving technical assistance from the agency since, as a matter of principle, we will not be able to give our consent to any undertaking which is not in conformity with the statute."

However, considering the importance India attached to the promotional activities of the agency and respecting the views of other member-states, India would continue to provide fellowships and the services of experts, besides facilities for scientific visits.

Regarding expansion of the IAEA Board of Governors, Mr Singh reiterated India's stand for more equitable geographical representation. The issue of expansion will be taken up by the conference on Monday.

Mr Singh expressed concern at the disproportionate share of IAEA expenses on safeguard activities. There is an immediate need to focus on energy supplies in developing nations, Mr Singh said.--PTI. UNI.

CSO: 5100

GOVERNMENT STATES POLICY FOR SELLING RANGER URANIUM SHARES

Conditions To Be Met

Melbourne THE AGE in English 27 Oct 79 p 5

[Article by Nigel Wilson]

[Text]

Groups wanting to buy the Federal Government's half share of the Ranger uranium project have been told they must change their offers to meet policy requirements.

At the same time the Government has said that only a quarter of its stake is available for foreign interests.

The Minister for National Resources, Mr. Anthony issued a list yesterday which shows the Government has discarded only three of the original 17 tenders.

He said the Government had decided to have talks with 14 organisations.

This would enable the Government to assess in more detail the value of the proposals, he said.

The Government wanted to resolve the Ranger issue promptly so there would be no unnecessary uncertainty in the market for Australian uranium.

The statement made it clear that unless the foreign dominated groups which tendered were prepared to alter their bids they would be unsuccessful.

This means the Government has turned down a bid of \$150 million

from the Denison Mines group of Canada — the top cash offer.

Mr. Anthony said the talks with the 14 companies would be held on the basis that three conditions had to be met if the Government did decide to sell:

- The whole of the Australian Atomic Energy Commission's interest in the project would be assigned to a single entity.
- The whole of the Commonwealth's entitlement to uranium and any other minerals produced at Ranger would be assigned, and
- The level of foreign participation would be limited to a maximum of 25 per cent.

This was in accordance with the Government's foreign investment guidelines. The Government would not sell more than 25 per cent of its interests to foreign organisations — that is, not more than 12.5 per cent of the total project.

Officials said later this was intended to give the existing Australian corporate partners, Peko Wallsend and EZ Industries, flexibility in selling up to a quarter of their share in exchange for sales contracts.

Mr. Anthony repeated that Peko and EZ had the right of first refusal on the AAEC's Ranger stake.

The talks for which no timetable has been set, will be with the ?? groups:

AGIP Australia (Italy), Australian United Corporation, Brambles Industries, British Civil Uranium Procurement Organisation/ Uranengesellschaft (British/German), Cogema/Electricite de France (French), CSR/Minatome Korea Electric and Samsung (Australia, French, Korean), Denison Mines (Canada), Esso Australia (US), Mary Kathleen Uranium, Newmont (US), Peko Wallsend (Australia/Japan), Phillips Uranium (US), Union Carbide (US) and Utah Development Co/ (US).

Opponents of uranium mining last night called for a boycott of the ANZ Bank.

The co-ordinator of the Movement Against Uranium Mining, Mr. Gareth Clayton, was speaking at the publication of a booklet outlining the bank's involvement in the uranium industry.

Mr. Clayton said the bank had invested more in the uranium industry than any financial institution in Australia.

Details on Bidders

Canberra THE WEEKEND AUSTRALIAN in English 27-28 Oct 79 p 17

[Article: "Who's Who in Running for Ranger"]

[Text] THE companies with which the Federal Government will hold further discussions on Ranger, are:

AGIP Australia Pty Ltd. An energy resources and exploration group owned by the Italian Government's State energy agency, ENI. The company is involved in the procurement of fuel for Italy's nuclear power stations.

AUSTRALIAN United Corp. A local merchant bank owned 45 per cent by Morgan Guaranty of the U.S. A spokesman yesterday indicated the company did not have sufficient funds to finance the acquisition of a half-share and it is understood it has made its bid on behalf of another unknown party or parties.

BRAMBLES Industries Ltd. The locally-based transport multinational which also has quarrying interests. Managing director, Mr W. J. Holcroft, was unavailable on Friday.

BRITISH Civil Uranium Procurement Organization/Urangesellschaft. BCUPO is a UK Government body made up of British Nuclear Fuel, Central Electricity Generating Board and Southern Scotland Generating Board. Urangesellschaft is owned equally by three German companies: Metallgesellschaft, a major industrial and mining group with a nuclear power subsidiary, Steag, which has investments in power generation facilities and is involved in uranium enrichment technology, and Veba, a power utility owned 40 per cent by the West German Government. Urangesellschaft already has a 10 per cent stake in the Yeelirrie uranium project.

COGEMA/Electricite de France. Two French Government-owned bodies. COGEMA is responsible for France's nuclear fuels cycle (except for actual power generation). Electricite de France produces about 80 per cent of France's electricity and runs a large number of its nuclear power stations.

CSR/Minatome/Korea Electric and Samsung

(Korea). CSR is the diversified sugar, coal and building products group. Minatome is a mining and exploration group jointly owned by two French companies: CFP, better known as the Total group, and Pechiney, a big aluminium company also involved in the nuclear fuels cycle. Korea Electric is the South Korean Government owned electricity utility and Samsung is a leading Korean trading, mining and manufacturing company which imports KE's uranium needs.

DENISON Mines (Canada). A Canadian uranium producer operating in Ontario which is also involved in mining exploration, petroleum, coal, finance and European marketing.

ESSO Australia Ltd. A local offshoot of the giant U.S. oil major Exxon. Its associate, Esso Exploration and Production, has a 15 per cent stake in the Yeelirrie uranium project, but is prepared to take up to 50 per cent of the production.

MARY Kathleen Uranium Ltd. The first Australian uranium producer, owned 51 per cent by the UK-controlled Conzinc Riotinto of Australia, 41.6 per cent by the Federal Government and the remainder by the Australian public.

NEWMONT Pty Ltd. A Canadian miner with copper, silver and gold mines in British Columbia.

PEKO-Wallsend Ltd. An existing partner with EZ industries in the Ranger deposit.

PHILLIPS Uranium Corp. An offshoot of the big U.S. oil major, Phillips Petroleum. In Australia, Phillips Petroleum subsidiaries have an interest in the North West Shelf and in a chemical plant at Kurnell, NSW.

UNION Carbide Corp. A diversified group and the second largest chemical group in the U.S. The Australian offshoot is a big chemical producer here.

UTAH Development Co. The giant mining multinational, predominantly U.S.-owned, which has a huge operation on the Queensland coalfields.

Government Stand Analyzed

Canberra THE WEEKEND AUSTRALIAN in English 27-28 Oct 79 p 16

[Commentary by Financial Editor Bryan Frith]

[Text] The Government's intentions with its Ranger uranium stake become progressively more curious.

The latest word on the proposed sale contains significant inconsistencies: either that or the Government is looking at totally changing the ground rules.

On Friday, Deputy Prime Minister and Minister for Trade and Resources Mr Anthony released the names of 14 tenderers (three tenders have apparently been rejected) with which it wants to hold discussions.

Only five Australian companies are named — transport and resources group Brambles, merchant bank Australian United Corp, industrial and mining group CSR, Mary Kathleen Uranium and one of the existing Ranger partners, Peko-Wallsend.

In fact, AUC is now classed as a foreign company because Morgan Guaranty Trust of the U.S. holds a 45 per cent controlling interest.

MKU, which runs the country's only current uranium mine, in Queensland, is also partly foreign owned.

It is 51 per cent controlled by Conzinc Riotinto of Australia, which in turn is 68 per cent owned by the UK mining house Rio Tinto-Zinc but which is committed to "naturalise" by gradually lifting local equity to 51 per cent.

The MKU tender must raise some problems for the Government because it also owns 41.6 per cent of MKU through the Australian Atomic Energy Commission.

The Government has for some time had its MKU stake up for sale, but buyers have been scarce because the mine has only a limited life and the company has run up heavy losses, although it returned to the black in the June half with a profit of \$8.8 million.

The Government is thus in the position that it is offering to sell its Ranger stake with one hand and seeking to buy it back with the other.

This is patently absurd, and it may be that the MKU tender attempts to resolve the dilemma, perhaps by cancelling the MKU interest as part of the consideration.

The other tenderers involve a mix of overseas uranium producers or consumers from the U.S., Britain, Italy, West Germany, France, South Korea, Canada and Japan. In most cases, the governments of these countries have interests in the tenderers.

The Government has conceded the claim of the other Ranger partners — Peko-Wallsend and EZ Industries — that if it sells it must assign its entire 30 per cent stake to a single entity,

which can include a consortium constituted as a corporate body.

At the same time, the level of foreign participation will be limited to a maximum of 25 per cent in accordance with its basic guidelines (which were recently waived to allow British Petroleum to acquire 50 per cent of WMC's huge Roxby Downs copper-uranium deposit in South Australia).

On top of this, the Government will not sell more than 25 per cent of its interest — or 12.5 per cent of the entire project — to foreign organisations.

This recognises the right of the Ranger partners to sell up to 12.5 per cent (6.25 per cent each) as part of their financing arrangements.

The glaring inconsistency is that nine of the bids for the 50 per cent Ranger stake are apparently from wholly-foreign owned companies or consortia.

Therefore the Government could not accept any of these tenders and still comply with its commitment to limit the overall foreign ownership to 25 per cent.

The only alternative is that the Government is considering acting as a "marriage broker" to combine some of the tenders. It would have to work on putting Australian and foreign interests together to honor its local ownership commitment.

This could be what the Government means by holding discussions directed to clarifying and "refining" the proposals submitted.

If the Government is considering such a move, it makes a farce of the whole tender procedure.

Moreover, the talks will invariably delay a decision on whether or not the Government will sell. Mr Anthony merely says a decision will be made "in due course."

As previously explained, a prompt decision is an urgent priority if the Ranger project is to obtain contracts to absorb the output when the mine starts production in October 1981.

Failure to obtain the few contracts still available would jeopardise the economics of the venture. It could therefore seriously impair the ability of the existing partners, Peko and EZ to arrange finance.

AUSTRALIA

FORMER STATE PREMIER DENIES HE DISTORTED REPORT ON URANIUM

Deputy Premier's Statement

Perth THE WEST AUSTRALIAN in English 31 Oct 79 p 3

[Text]

ADELAIDE: The South Australian Parliament was told yesterday that the former Dunstan government withheld and misrepresented information about uranium.

The Deputy Premier, Mr Roger Goldsworthy, in a 17-page ministerial statement to the House of Assembly, said that advice and facts about uranium development had been misrepresented in Parliament by the former Premier, Mr Dunstan, after an overseas fact-finding mission.

The actions of the former Government in misrepresenting information had been reprehensible, he said.

Mr Dunstan had gone overseas in January of this year accompanied by the former Director of Mines, Mr S. B. Dickinson, his executive assistant, Mr R. Guerin, his press secretary, Mr M. Rann, and Mr R. Wilmshurst, a technical direc-

tor of Australian Mineral Development Laboratories.

When the group returned, Mr Dunstan had said it was unanimous in its findings that uranium mining could not go ahead until it was safe.

Mr Dunstan's statement had misrepresented the views of two of the technical experts, Mr Dickinson and Mr Wilmshurst.

In his report Mr Dickinson had said: "Overall the visit resulted in unanimity that mining and treatment of uranium could proceed in SA subject to rigid international safeguards controls and codes for waste management within the framework of consumer countries."

"The consensus view

was that effective safeguards could be operative in the early 1980s in most countries where governments had made commitments to honour the non-proliferation treaty.

"In anticipation of these conditions becoming established, it was also the consensus view that the safeguards needed for the sale of uranium could now be drafted and form the basis for discussions with the Commonwealth Government."

Technical

Mr Goldsworthy said that Mr Wilmshurst had said in his report: "There is no technical reason why concern about waste disposal or

safeguards should prevent uranium mining in SA."

Mr Goldsworthy tabled seven documents, which he said supported his claims—including a memorandum to the Director of Mines and Energy. This accused another former Premier, Mr Corcoran, of making misleading statements about uranium.

The memorandum was from Mr Dickinson and expressed anxiety at the misrepresentation contained in a press statement issued by Mr Corcoran on August 1.

Mr Dunstan could not be contacted yesterday. Mr Corcoran said he did not want to comment.

Details of Denial Given

Canberra THE AUSTRALIAN in English 1 Nov 79 p 2

[Text]

THE former South Australian Premier, Mr Don Dunstan, yesterday denied he made misleading statements to State Parliament over uranium safety.

The accusations stem from reports tabled in the State Parliament on Tuesday and originally filed by two experts who accompanied Mr Dunstan on an international fact-finding tour in January.

The State Minister for Mines and Energy, Mr Goldsworthy, claims the reports show that Mr Dunstan "grossly misrepresented" the experts' advice.

Mr Dunstan said in Sydney: "That is Mr Goldsworthy's normal form.

"I misrepresented no fact and no person. The facts which I put to Parliament were agreed with me by Mr Ben Dickinson and Mr Ron Wilmhurst, the technical officers who accompanied me.

"Those facts, about which there was no dissension, were the basis of my statement to Parliament."

The fragments of the reports tabled by Mr Goldsworthy "do not in any way contradict what I had to say."

"They (the reports) relate to the view that it may well be possible within the time it would take full-scale mining to occur (in South Australia) for customer countries to satisfy safety conditions."

REPORTED 'LEAK' IN LUCAS HEIGHTS REACTOR CAUSES CONCERN

NSW Message to Canberra

Sydney THE SYDNEY MORNING HERALD in English 30 Oct 79 p 3

[Text]

By RODNEY FRAIL and GRAHAM WILLIAMS

The Premier, Mr Wran, has sought an assurance from the Prime Minister, Mr Fraser, that the Lucas Heights nuclear reactor is not leaking and does not pose a threat to public safety.

Mr Wran said at a press conference yesterday that consideration should be given to whether the plant should be moved away from heavily populated areas.

In a cable to the Prime Minister yesterday, Mr Wran said he had seen press reports of a leak of radioactive material at Lucas Heights.

The Premier asked for assurances that:

NO radioactive material had escaped from the reactor.

ALL steps were taken to ensure no such leakage occurred during the shutdown.

WHEN the reactor was again commissioned it would be entirely safe.

Mr Wran said later he was critical of the lack of communication from the Federal Government, which, is responsible for the plant, to the State Government on what occurs at Lucas Heights.

"The NSW Government and indeed the people of Sydney are entitled to an assurance from the Federal Government that there is no danger from the Lucas Heights reactor," he said.

There had been some communication between Canberra and the NSW Health Commission, but not at a satisfactory level.

The general manager of the Atomic Energy Commission, Mr Keith Alder, said yesterday that no radiation leak had occurred in the 21-year-old reactor, but it would be shut down now, probably until March, while a defective part was replaced.

The fault is in a stainless steel bellows in an expansion joint.

The main uses of the reactor are for neutron beam studies by universities and for production of medical radio-isotopes.

Mr Alder said the only significant effect of closing the reactor for 51 months would be to suspend neutron beam research.

Supply of radio-isotopes to hospitals for medical scanning would not be affected because the Atomic Energy Commission was now importing radio-isotopes normally produced at the reactor.

The commission's income from sales and exports of radio-isotopes is about \$1.5 million a year, and Mr Alder estimated that supplies worth about \$500,000 would have to be imported.

Dr John Morris, head of nuclear medicine at Royal Prince Alfred Hospital, Sydney, which is the biggest medical user of radio-isotopes in the world, said: "We have not been affected in any way."

"There is a remote chance that continuity of supplies may be interrupted by delay of aircraft."

Mr Leslie Kemeny, senior lecturer in nuclear engineering at the University of NSW, said the long shut-down would increase pressure for a second nuclear reactor.

Many university research projects using the neutron beam to analyse molecules would have to be suspended while the reactor was shut down.

Further Details Given

Canberra THE AUSTRALIAN in English 30 Oct 79 p 1

[Report from Jenny Small and Bill West]

[Text]

THE NSW Premier, Mr Wran, yesterday criticised the Federal Government for its lack of communication over a leak at the Atomic Energy Commission's plant at Lucas Heights, near Sydney.

Mr Wran sent a telex to the Prime Minister, Mr Fraser, seeking assurances after reports of a radioactive leak sparked confusion, alarm and a denial from the commission.

The alarm was caused by a report that a radioactive substance, tritium, had been escaping from the reactor.

Mr Wran said his telex was a precautionary measure because the State Government had no control over what happened at the site, and people needed to be assured about their safety.

He first learned of the leak through a radio news item and found there had been some Federal Government communication with the NSW Health Commission, "but not at a high enough level."

DISTRESSING

Mr Wran said: "There is a need for greater and closer lines of communication. It is

about time guidelines were laid down for closely informing the State Government of events."

He had heard an engineer describe the plant as the equivalent of a DC-3 aircraft.

"If that's so, it's about time consideration is given to whether the plant should be maintained or located elsewhere," he said.

"It is not a very desirable thing to have this activity in a residential area."

In his telex Mr Wran asked if anything out of the ordinary prompted the closure of the reactor, whether any radioactive material had escaped, and whether it would be safe when it began working again.

The general manager of the commission, Mr Keith Alder, said there was no danger.

He described the incident at Lucas Heights as a "purely routine operation" and said the use of the word "leak" was distressing because it implied something "had got out" into the atmosphere.

Mr Alder said: "Nothing has escaped from the reactor. Nothing has happened which will affect any living thing outside the Lucas Heights reactor."

"We have isolated a leak within the system. The parts involved will be replaced."

Reply from Deputy Premier

Sydney THE SYDNEY MORNING HERALD in English 31 Oct 79 p, 1, 2

[Text] The Deputy Prime Minister, Mr Anthony, assured the Premier, Mr Wran, yesterday that the Lucas Heights nuclear reactor was not leaking and not a threat to public safety. However, Mr Wran rejected the assurance.

Mr Wran said the reactor was too close to homes. He "applauded" suggestions that if a new reactor was to be built, it should be built at Jervis Bay.

Mr Wran sought the assurance after reports were published on Monday that leaks were found in the reactor when it was closed for maintenance.

Mr Anthony sent the assurance in a Telex message to Mr Wran then issued a statement, saying reports of the reactor's closure were exaggerated.

"The only people who would welcome this episode of scare-mongering are those members of the noisy lobby determined to halt the peaceful use of nuclear energy throughout the world."

He said that he was disturbed that alarmist reports about the reactor had been given such wide circulation and that Sydney people had been unnecessarily alarmed.

Replacement of joints

Mr Anthony's Telex to Mr Wran said:
My dear Premier,

Thank you for your Telex message of 29 October, 1979 concerning media reports relating to the shutdown of the Australian Atomic Energy Commission's research reactor at Lucas Heights.

I am advised that, as part of the commission's comprehensive program of inspection and maintenance, the Hifar reactor is shut down every few years for an extended period.

During the present inspection, it was considered desirable to replace some expansion joints that have been in service since 1958.

New components will be manufactured and, as a consequence the planned shutdown period will be extended

to March, 1983. The replacement is a straightforward operation.

The commission has advised that there has been no leakage of radioactive material from the reactor and appropriate precautions are being taken to prevent any possible hazards — physical, chemical and radiation — during all stages of the shutdown. The reactor will not be brought back into service until the commission is satisfied that all components are performing to design specifications.

Yours sincerely,
J. D. Anthony

Mr Wran said Mr Anthony's answer was unacceptable because it was qualified by terms such as "I am advised" and "the commission has advised me."

"In other words we have no assurance other than those that were given yesterday," he said.

Mr Wran was referring to a statement by the general manager of the AAEC, Mr Keith Alder, issued on Monday, that no radiation leak had occurred, but that the reactor would be closed down probably until March so a defective part could be replaced.

Mr Wran said the NSW Government and the public were entitled to the clearest possible statement at the highest possible level as to what was occurring at Lucas Heights and the Federal Government's plans in relation to a new reactor.

He would ask the NSW Energy Authority to seek an early meeting with Commonwealth officials to get these answers.

"It [the reactor] is far too close to residential buildings and if there is to be a new reactor then I uphold suggestions that it is to be constructed on Federal Territory at Jervis Bay," he said.

Mr Alder said yesterday the commission had not considered where a new reactor might be built.

It had begun a study in mid-1977 into the possibility of building another reactor to replace the 25-year-old plant at Lucas Heights.

The most suitable type seemed to be a "pool" reactor, which instead of being covered by a solid concrete shell was submerged in a pool of water.

A preliminary report would be submitted to the Federal Government early next year which would seek authority to continue the feasibility study and to examine the environmental and practical aspects of a new site.

The next stage of investigations would cost "many millions of dollars."

Mr Alder agreed that location would be not only an environmental question but also a political question to be determined by the Federal Government.

Mr John Hutton, Independent State MP for the South Coast, commenting yesterday on the suggestion of a Jervis Bay site for a new reactor, said it was unfair for Mr Wran to "indict" such a plant on the South Coast simply because he didn't want it in Sydney.

"If there is any hint it is dangerous let us not inflict it upon anyone," Mr Hutton said.

Replacement Reactor Studied

Melbourne THE AGE in English 30 Oct 79 p 1

[Report from Robert Haupt]

[Text] Sydney.--The Federal Government is expected to be advised soon to replace the main nuclear reactor at Lucas Heights with a French-designed reactor costing \$30 to 40 million.

The Australian Atomic Energy Commission will report to the Government early next year on what sort of reactors Australia needs and which of the available reactors best fits the bill.

While there are some problems with it, the French "swimming pool" design is the clear frontrunner.

Four variants of this design, all operating in France, have been studied by the commission.

The search for a new reactor was brought to light by the discovery early this month of leaks in parts of the heavy-water system of the main reactor at the commission's research establishment at Lucas Heights.

The faults were found during routine maintenance on HIFAR (High Flux Australian Reactor). No radiation escaped.

Commission officials said on Friday they believed the leaks, in expansion joints, were a sign of age in the 21-year-old HIFAR.

While HIFAR was built to test material which might be used in power station reactors, it ended up being more important as a tool for pure scientific research and as a factory for radioactive material used in nuclear medicine.

The new reactor will be chosen on its ability to perform the research and medical tasks, commission officials said.

The "swimming pool" design appeals to the commission because of its simplicity, which makes it easy to use, and its power.

The French reactors are in the 30-65 megawatt range whereas HIFAR operates at 10 mw. More important, the French reactors yield a higher flux (more intense neutron radiation).

Commission officials say the full range of nuclear materials for high flux is needed to produce medicines.

Universities also primarily require a strong beam of neutrons for research.

Water

The "swimming pool" design is simple. It has no expansion joints as there are no pipes or pumps leading to or from the reactor core.

Instead, the core -- the place where fission occurs -- sits at the bottom of a pool of water, which shields and cools it.

Equipment and materials to be irradiated can be lowered into it.

In HIFAR, the core is locked away within chambers of concrete, lead and steel, which make it difficult to reach and costly to maintain.

As with most advances in nuclear applications, however, there is a drawback.

The "swimming pool" reactors operate on highly-enriched uranium and the commission is wary of relying on supplies of that controversial fuel.

Highly enriched uranium is one of the two materials from which nuclear explosives can be made.

With the Federal Government taking an advanced position against the proliferation of nuclear weapons, it would not sit well for Australia to build a new reactor which required weapons-grade uranium, or anything like it.

Enrichment is the process whereby the isotope, uranium 235 (which is fissionable) is increased beyond its natural proportion in uranium of 0.7 per cent.

Ordinary power station reactors work on uranium enriched to three per cent. Bombs are made from uranium enriched to about 90 per cent.

The HIFAR reactor requires 84 per cent-enriched uranium. Once obtainable from Britain, this sensitive commodity now comes to Lucas Heights from the United States.

Early Replacement Urged

Melbourne THE AGE in English 30 Oct 79 p 11

[Editorial: "The Lesson of Lucas Heights"]

[Text]

THE radioactive material that leaked from parts of the main nuclear reactor at Lucas Heights could have endangered the public only if no effective safety systems existed to catch it. There are two areas between the place where the material was found and the open area. The first defence, a set of safety shields, was designed solely to catch the leak that occurred. It worked; the back-up was never needed. The amount of radioactive material that could have leaked this way was small — this was never a China Syndrome — and the leak that did occur was picked up, appropriately, during regular maintenance. Nothing happened at Lucas Heights that was not foreseen, and provided for, by those who designed the reactor in the 1950s.

There is reason for concern, however, out of the events that came to light this week. According to the Australian Atomic Energy Commission, it would be 10 years before a new reactor could be built and activated. Were that process to begin today, the present Lucas Heights reactor, upon which we rely rather more than many of us suspected, would be 31 years old. However predictable they were, and however capably they were handled, the faults that were uncovered in that reactor were signs of age. What other signs will be showing, 10 years on?

Those designers, working at the dawn of nuclear power, would have been surprised to learn only one thing about their reactor today: that it was still in service as Australia's sole

reactor of any size. In its 22nd year of continuous commission, this reactor alone can do for Australia a variety of tasks in research, industry and medicine that modern industrial societies demand as a matter of course. The Lucas Heights reactor has done them well; we should not seek change for its own sake.

The Federal Government recognised this problem, and two years ago asked the AAEC to study and report on alternatives. Meanwhile, the AAEC itself is under investigation by the Government, in its review of the science and technology agencies. There has to be a doubt, if only about appearances, that the AAEC is the group to handle this assignment. There was a time when the AAEC was run by ardent souls, who had mapped out Australia's nuclear future among themselves and required of the Government of the day only that it put its name to it. The centrepiece of their plan was a nuclear power station at Jarvis Bay, a gift of technology that was mercifully averted.

Those times have passed. Nuclear salesmanship in the Baxter tradition is a relic today. Beset by opposition from the municipal to the international level, the AAEC must have learned that the political rules have changed. Their choice of a replacement reactor must conform to the new mood. The replacement must be at modest cost, have a low potential for weapons proliferation and be geared primarily to the needs of pure research and nuclear medicine. Such a replacement should be approved by the Government and built before too long.

AUSTRALIA

PRESS REPORTS ON PROBLEMS OF NUCLEAR WASTE DISPOSAL

Maralinga Waste to UK

Melbourne THE AGE in English 23 Oct 79 p 1

[Report from Simon Balderstone]

[Text] Canberra.--Eleven and a half tonnes of material was transported to Britain earlier this year from the former nuclear testing site of Maralinga in South Australia.

The material was moved in an operation which, the Australian and British Governments said at the time, was to transfer safely only half a kilogram of plutonium to Britain.

The plutonium had been buried at Maralinga since the British Government stopped its nuclear testing there in the 1950s.

Experts say half a kilogram of concentrated plutonium would be about the size of a small egg.

But the Australian Minister for National Development, Mr. Newman, has told a parliamentary estimates committee hearing that 11,400 kilograms of material were transported from Maralinga in the March operation.

There were six containers holding the plutonium and a seventh "with bits and pieces", he said last week.

The Government said after the material was moved that it was buried in six containers in a concrete grave covered by a steel lid a few feet under the ground at Maralinga.

Each container weighed about 600 kilograms, and the waste was stored inside a salt solution in plastic bags inside the containers.

A spokesman for Mr. Newman said each of the six cement containers sent to England weighed about 2000 kilograms.

But last night the radiation protection officer at the University of Melbourne,

Mr. Rob Rowbottom, said the normal way of transporting plutonium was in a plastic bag inside a tin covering.

Cement or concrete was needed only if the material being moved was more dangerous and emitted gamma rays.

Plutonium emitted alpha particles only, which could easily be stopped by sheets of paper.

But because it caught fire if exposed to air, the material had to be sealed by plastic.

Mr. Rowbottom said plutonium was about the same weight as lead and half a kilo would be about a 2.5 centimetre cube — or the size of a small egg.

The weight of the material transported to England — after an agreement was reached with the British Government — could be because dangerous by-products from experiments had to be removed, or such a large area of by-products from experiments had to Maralinga was contaminated with plutonium that large amounts of soil and other material had to be transferred.

If the experiments at Maralinga included work on a cobalt bomb, which would give off extremely dangerous gamma rays for a long period, cement contaminated material.

The latest report of the Department of National Development says that in March this year "approximately half a kilogram of plutonium from Maralinga was repatriated to the United Kingdom".

Minister's Explanation

Perth THE WEST AUSTRALIAN in English 24 Oct 79 p 26

[Text] Canberra: Half a kilo of plutonium from the Maralinga atomic test site in South Australia was shipped to Britain in a salt mixture, the National Development Minister, Mr Newman, said yesterday.

The plutonium was sent in containers removed from a burial pit at the test site.

He said that the radioactive waste was dispersed throughout salt in the containers and the total weight was about 1.63 tonnes.

Officials said that the plutonium and salt had been sealed in concrete and plastic and stored in six steel drums.

Another drum containing clothing, gloves and waste material used in cleaning-up the test site was also shipped to Britain.

In a statement, Mr Newman said that claims by a Labor front-bencherman, Mr T. Wron, that the Government had misled the Australian people about the repatriation of plutonium from Maralinga were incorrect.

The removal of the waste had been supervised by officials from the Federal Government and the then SA Labor Government.

On March 22 he had issued a statement, in conjunction with the then SA Premier Mr Corcoran, saying that plutonium previously buried at

Maralinga had been repatriated to Britain.

The containers removed from the burial pit at Maralinga contained about half a kilo of plutonium.

The total weight of material in this form was about 1.63 tonnes.

"After removal from the burial pit the six containers were grouted with cement and placed inside specially constructed transport drums supplied by the British authorities," Mr Newman said.

FILLED

"The drums were then filled with concrete.

"The gross weight of the six drums—including the concrete—was 11.77 tonnes.

"In addition, a box of miscellaneous equipment supplied by Britain for use in the packaging operation was also returned. It included radiological protective clothing, air filters for drums, some hand tools and a drum collar.

"This container weighed about 150kg."

A spokesman for Mr Newman's office last night would not say how the radioactive waste was sent to Britain.

Waste at Australind

Perth THE WEST AUSTRALIAN in English 31 Oct 79 p 5

[Text] Bush-walkers and children have access to a chemical dump at Australind where low-level radioactive waste is stored.

Laporte Australia Ltd confirmed yesterday that it was storing low-level radioactive waste on a dump on its land and that sometimes children had to be ordered off the disposal area.

The issue came to public notice because the Public Health Department was tardy in answering questions about the dump.

The endorsed ALP candidate for Wellington, Mrs Patricia Rutherford, said she wrote to the department on August 18 asking about chemicals in the dump. Three weeks later she had not received a reply.

She had then asked the questions through the Rockingham MLA, Mr

Michael Barnett, in the State Parliament.

Since then, Mrs Rutherford said, she had received a reply which detailed the chemicals.

NO REAL THREAT

Though she understood that there was no real threat to the public because the chemicals were radioactively low, she believed that the public should be warned.

The waste was radium 228 and radium 226, the radioactivity of which was concentrated by processing.

Radium 228 had a half-life of six years and radium 226 a half-life of 1600 years.

Mrs Rutherford said that though the dump

was on private land, it was only about 200 metres from the Collier River, where bushwalkers often went.

A spokesman for Laporte, Mr Peter Longbottom, said the company's studies had shown that the radiation was unlikely to be harmful.

The disposal system had been approved by officials from the State X-ray Laboratories.

The dump had notices warning people to keep away.

"Obviously a chemicals dump is no place for children, but I would be more worried about something like a landslide."

Shipment to Singapore

Perth THE WEST AUSTRALIAN in English 31 Oct 79 p 10

[Text] An international impasse has developed over radioactive waste in Singapore that is linked with the loss of a measuring device at Kambalda.

A company that consigned a shipment of scrap metal from WA to Singapore National Iron and Steel Mills has refused to accept responsibility for the waste.

The company, Simsmetal Pty Ltd, claims there is no conclusive proof that the radioactive device was sent to Singapore and that it caused radioactivity in an SNISM blast furnace.

But as a gesture of goodwill Simsmetal has agreed to attempt to arrange for disposal of the waste.

The problem is that only Britain and the U.S. have the facilities to dispose of the waste in accordance with international standards. Authorities in both those countries have refused to grant permits for the waste to be imported.

The waste, consisting of bricks from the interior of the blast furnace and a solution that was used to wash it down, is being stored in 114 drums at an SNISM plant.

DENIAL

A spokesman for Simsmetal, Mr Paul Mazoudier, said yesterday that his company had never accepted that the radioactivity was caused by the measuring device.

He said: "After WMC advised that the device had been lost, we told all our clients in the Pacific basin that it might have been in a shipment that left Fremantle."

"Subsequently, SNISM detected low levels of radioactivity in the blast furnace and closed it down for the clean-up."

"Since then we have been doing all we can for the sake of goodwill,

to dispose of the waste."

Mr Mazoudier said that the level of radioactivity was barely detectable. All but four of the drums gave no reading when measured from a metre away.

"We have got the same reading from beach sand in WA," he said.

"There is nothing unusual about the missing device. The water board in Sydney has 11,000 of them."

The general manager of SNISM, Mr Ang Kong Hua, said this week that his company was under pressure from the Singapore authorities to arrange for the disposal of the waste.

Mr Ang said that his company was negotiating with Simsmetal and hoped that some agreement could be reached as soon as possible.

Australian Responsibility Stressed

Perth THE WEST AUSTRALIAN in English 31 Oct 79 p 6

[Editorial: "Our Waste"]

[Text]

When Australians learnt last year that half a kilogram of plutonium was left behind in South Australia after nuclear testing ended there in the 1960s, public pressure ensured that the waste was collected and transferred out of the country. The principle was clear: Britain caused the problem and it was Britain's to solve.

There is a parallel today in the case of radioactive waste accidentally shipped from WA to Singapore in a load of scrap metal. The circumstances are different, admittedly, and the scale of the problem far smaller, but the principle is the same. A mistake was made at our end and that is where the responsibility lies. Singapore wants the waste removed and it is up to the Australian firms involved to see that it is. Legal wrangles over whose job it is can only delay the matter and damage our national reputation, as friend and trading partner. If necessary, the Federal Government should step in and ensure that the removal is carried out promptly.

CSO: 5100

KENNEDY REPORT ON THREE MILE ISLAND INCIDENT ANALYZED

Sydney THE SYDNEY MORNING HERALD in English 2 Nov 79 p 6

[Editorial: "Three Mile Island"]

[Text]

"MORE people died at Chappaquiddick than at Three Mile Island," reads an anti-Kennedy T-shirt slogan at present in vogue in the United States. The callous tastelessness of the inscription does not diminish the fact that there were no fatalities, let alone injuries, in what has been described as "the worst accident in the history of commercial nuclear power generation." In its short 25-year history, the nuclear power generating industry has set a remarkable safety record. The first report of Australia's Fox Commission found that "there is no evidence yet of any member of the public having been harmed as a result of an accident in a commercial power reactor despite many 'abnormal occurrences'."

Nothing has happened in the three years since the report was issued to modify that statement. For all that, however, the Three Mile Island accident was a salutary reminder that things can go wrong with nuclear power plants despite government licensing and regulatory control at all phases of their design, construction and operation. In a lengthy report on Three Mile Island issued in Washington this week, the 12-member Kennedy Commission said that it was convinced that such an accident was "eventually inevitable."

The merciful aspect is that the inevitable has happened and without loss of life has exposed serious shortcomings in the operating procedures of the Three Mile Island plant and, by inference, other similar plants in the nuclear power

industry. It is vital that the industry should act promptly on the lesson learned so cheaply and do everything possible to prevent a recurrence. The starting point should be the training of operators not only to perform their normal tasks competently but also to deal efficiently with abnormal situations.

The Kemeny Commission found the main cause of the Three Mile Island accident lay in confusion and mistakes by people reacting to a minor equipment failure. From the report's nightmarish description of the "bedlam atmosphere" of the scene it is little wonder that there was human confusion. Early in the accident, 100 different alarms were going off simultaneously, with the operators unable to discriminate between the serious and the trivial. Thus although the Kemeny Commission found that the training of operators was grossly deficient, it was also sharply critical of the design of control rooms and the inability of both the corporate operator and manufacturer to learn from past mistakes.

A significant aspect of the report is the absence of any recommendation that construction of new reactors should be delayed. There is little doubt that Three Mile Island has already caused cancellations and delays of nuclear power projects, although this is likely to emerge as no more than a hiccup in the upward trend of development.

Of lesser importance but worth recalling is the fact that after the Three Mile Island accident, the most rabid of the pro-nuclear lobby made the press, radio and television the target of a virulent campaign alleging grossly exaggerated reporting. It is nothing new for the press to be the whipping boy. In this case, however, the commission examined the facts, and noted that in general the media tried to give a balanced presentation of the accident. And this despite great difficulties at the time.

AUSTRALIA

PROFESSOR URGES NUCLEAR POWER TO SAVE NATIONAL ECONOMIES

Perth THE WEST AUSTRALIAN in English 1 Nov 79 p 9

[Text] Sydney: National economies would collapse and nations would fight each other for access to dwindling energy supplies if nuclear power was not used, Professor Sir Ernest Titterton warned yesterday.

Hydrocarbon resources were relatively limited, and alternative methods of energy generation had not been proved viable on a big scale, he said.

Fortunately, nuclear power was available and could prevent a calamitous collapse of our civilisation.

Sir Ernest is professor of nuclear physics at the Australian National University in Canberra. He was addressing the fourth national productivity conference organized by the Productivity Promotion Council of Australia.

The theme of the two-day conference was productivity action in the eighties.

In his address on productivity improvement and energy use, Sir Ernest said that the nation with the highest energy consumption per head would have the highest standard of living and the potential for the highest productivity.

"The long-haired dogooders, who invite others to give up high energy consumption in favour of a 'low-energy input later' alternative are merely inviting their fellows to accept a lower standard of living," the professor said.

It was necessary to consider the world's population, all of whom expected to share Planet Earth's reserves in order to understand the problem of energy resources.

World population was likely to reach a limit of between 12,000 and 15,000 million--three to four times as many "customers" for energy as existed today.

The standard of living of non-Western nations must rise so that eventually these countries would approach the West in energy consumption.

Accordingly, as the world became fully developed and poverty was eliminated in the underdeveloped world, total world energy use would be expected to rise by perhaps 14 times, Sir Ernest said.

But fossil fuel reserves, known and anticipated, would be totally unable to satisfy this demand.

CSO: 5100

AUSTRALIA

QUEENSLAND MINES REVISES ESTIMATE OF NABARLEK DEPOSIT

Melbourne THE AGE in English 31 Oct 79 p 25

[Report from Ian Porter]

[Text] Queensland Mines has recovered about \$200 million worth of extra uranium from its Nabarlek mine in the Northern Territory.

Mining of the ore was completed recently and it was found that the stockpile contained 32 per cent more uranium than had been estimated.

Original estimates indicated about 9100 tonnes of U308 was contained in the ore.

But radiometric assays of each of the 8800 truck loads of ore and assays of the stockpile itself indicate that there are "in excess" of 12,000 tonnes.

Directors said yesterday the accuracy of the latest figures would not be firmly established until some time after milling operations start in 1980.

The geologists will then have an idea of how much U308 will be won from the ore.

The milling plant is under construction.

At present world prices of about \$35 a pound, the extra 2900 tonnes of uranium will be worth around \$300 million.

The whole stockpile is worth at least \$840 million.

On yesterday's closing share price of \$62.20, Queensland Mines was worth a total of \$119 million.

The latest revision of the Nabarlek uranium makes up for the overestimates made early in the deposit's history.

The first estimate of the Nabarlek find, made in 1970, stated that reserves of uranium oxide totalled 55,000 tonnes.

This was subsequently downgraded in 1971 when directors said reserves were only 10,500 tonnes contained in 440,000 tonnes of ore.

Mining was delayed for years by the Fox Inquiry into uranium mining and protracted negotiations with the Aboriginal land owners.

These delays forced the company to declare force majeure on contracts with two Japanese power companies.

The needed uranium was supplied by the Australian Atomic Energy Commission from its Lucas Heights reactor.

The proceeds of the sales were paid to the Government and will be repaid when Queensland Mines replaces the uranium supplied.

In 1978, 83 tonnes worth \$5.3 million were shipped to Japan.

Queensland Mines has several other uranium deposits under exploration.

The two main deposits at its Westmerland prospect together almost equal the total U308 recovered from Nabarlek, although the ore is of a lower grade.

WEST AUSTRALIA PROPOSED AS LOCATION OF SECOND REACTOR

Perth THE WEST AUSTRALIAN in English 2 Nov 79 pp 1, 25

[Text]

A WA Government suggestion yesterday that Australia's second nuclear research reactor should be built in WA provoked strong criticism from the Opposition.

The Premier, Sir Charles Court, sent a telegram to the Prime Minister, Mr Fraser, yesterday suggesting Federal-State ministerial talks on the WA proposal.

The Leader of the Opposition, Mr Davies, reacted immediately, accusing Sir Charles of jeopardising the health and safety of many generations of West Australians with his nuclear proposals.

He said there were enormous risks associated with the nuclear industry and he was appalled by the latest move.

The next WA Labor government would get in touch with Mr Fraser to withdraw Sir Charles's irresponsible offer.

Vital

Sir Charles said that the shutdown for routine maintenance of Australia's only nuclear research reactor at Lucas Heights, near Sydney, had cut off vital research services and the supply of radio isotopes for medical treatment and

diagnosis in all States.

This emphasised the need for a second reactor to handle the rising load and to provide an alternative source when one reactor was shut down for maintenance or any other reason.

His approach to Mr Fraser had been prompted by the unwarranted scare tactics of the New South Wales Premier, Mr Wran, over the normal Lucas Heights shutdown.

Mr Wran sent a message to Mr Fraser this week seeking an assurance that the reactor did not pose a threat to public safety.

He told Mr Fraser that he had seen reports of a leak of radioactive material at Lucas Heights. He wanted a full explanation of the reasons for the reactor being shut down.

Sir Charles said Mr Wran's pretence that the shutdown constituted some kind of danger, when there was none, should disqualify NSW as a location for a second nuclear research reactor.

Lucas Heights had operated safely for nearly 25 years and its record did not warrant such an irresponsible reaction as that by Mr Wran.

The Minister for National Development, Mr Newman, said on Tuesday that there was no danger to the community from the breakdown in the reactor which caused heavy water to leak into an outer shield in the expansion chamber.

He also revealed that the Federal Government had been considering for 18 months the possible replacement of the reactor.

Sir Charles said yesterday that WA, with its uranium resources and its forthcoming need for nuclear power generation, would welcome the establishment of a nuclear research reactor here.

It could significantly diversify WA's programme of energy research. It would have the national advantage of decentralising the location of such important facilities.

There were no practical reasons why such facilities had to be located near the Sydney-Melbourne axis, he said.

Mr Davies said that Labor would have nothing to do with Sir Charles's foolish and unnecessary proposal for a nuclear power station only a few kilometres from Perth's rapidly ex-

panding northern residential areas.

Nor would it have anything to do with his proposal for a nuclear research reactor.

Presumably such a reactor would have to be associated with one of Perth's two universities.

The risks associated with the nuclear industry had been amply shown around the world in recent months.

WA had no need to take the risks involved in establishing a nuclear power station and it should not import other unnecessary nuclear risks for other purposes.

The Government had justified many of the provisions of its industrial legislation on the grounds that opinion polls showed public support for them.

The same polls showed majority opposition to the establishment of a nuclear power station in WA.

If Sir Charles took notice of the polls on one issue he should not refuse to do so on others.

The rest of the world was pausing to reconsider its involvement with the nuclear industry, but Sir Charles was rushing ahead mindless of the dangers, Mr Davies said.

AUSTRALIA

BRIEFS

NUCLEAR-FREE COMMUNITIES--Fitzroy council has banned uranium prospecting and mining in the municipality. The council has also given notice that all vehicles carrying radioactive material are banned from streets under its control. The two moves are part of a new urban phenomenon--the nuclear-free zone. The other councils that have declared nuclear-free zones are Eltham, Sherbrooke, Northcote, Preston, Coburg, Essendon, Broadmeadows and Port Melbourne. A spokesman for the movement Against Uranium Mining said the zones were an Australian idea which had caught on overseas. St. Vincent's Hospital, in Fitzroy, gets regular deliveries of radioactive material for its nuclear medicine department. But the council policy makes an exception for radioactive material used for medical purposes. [Excerpts] [Melbourne THE AGE in English 31 Oct 79 p 3]

NUCLEAR-FREE ZONE CALL--The Liverpool City Council will consider declaring the municipality a nuclear-free zone. The Lucas Heights nuclear reactor, in Sutherland Shire, is about 10 kilometres from the boundary of Liverpool. Residents said yesterday that trucks carrying yellowcake from the reactor site occasionally used roads through Liverpool. Mr Donald Syme, of the East Ward Progress Association, covering the districts of Holsworthy, Chipping Norton, Moorebank and Hammondville, said the proposal had come from the Liverpool Nuclear-Free Committee formed in June this year. [Excerpts] [Sydney THE SYDNEY MORNING HERALD in English 2 Nov 79 p 10]

JABILUKA OUTLOOK--Expectations are improving that the log jam blocking the development of the Jabiluka uranium project will be broken, the chairman of Pancontinental Mining Ltd, Mr A. J. Grey, says in his annual report. There is now a widely based consensus that it is in Australia's national interest to take advantage of the vast economic benefits to be derived from the nation's uranium resources, he says. Pancontinental has yet to reach agreement with the Northern Land Council on Jabiluka's environmental terms and conditions and on financial compensation. Mr Grey says that once the uranium industry is in full production, Aboriginal communities will receive more than \$40 million a year in royalties for at least 30 years. [Excerpt] [Sydney THE SYDNEY MORNING HERALD in English 1 Nov 79 p 23]

MARY KATHLEEN PRODUCTION--Mary Kathleen Uranium yesterday announced higher uranium production for the September quarter. Output of uranium oxide in the latest quarter rose to 235.4 tonnes, compared with 214.6 tonnes for the previous quarter and 148.3 tonnes for the March quarter--when production was severely disrupted by an industrial dispute. Production for the September, 1978, quarter was 138.2 tonnes compared with 153.2 tonnes for the June, 1978, quarter and 116.6 tonnes for the March, 1978, quarter. MKU earned nearly \$9 million in the June half-year after posting its first profit from uranium sales in 15 years in the preceding half. [Text] [Melbourne THE AGE in English 31 Oct 79 p 25]

CSO: 5100

NUCLEAR FUEL: SOVIET OFFER AT IAEA MEETING

Madras THE HINDU in English 7 Dec 79 p 9

[Text] New Delhi, Dec. 6. Participating in the general debate at the International Atomic Energy Agency conference here today, Sir John Hill, chairman of the U. K. Atomic Energy Authority, held out bright prospects for fast reactors which make possible the utilisation of India's rich thorium resources for the atomic power programme.

Sir John reported to the conference that British experiments with prototypes had enhanced confidence in the safety of the system. The British nuclear industry was working on various strategies for commercial utilisation of a system, which produced more nuclear fuel than was consumed.

India too is experimenting with fast reactors since the fuel cycle permits the conversion of thorium into uranium needed for producing atomic energy.

Sir John said a British plant was already reprocessing enriched uranium fuel from the first fast reactor and would go on to reprocess plutonium fuel from the prototype fast reactor.

No Breaches of NPT

Referring to the Nuclear Non-Proliferation Treaty, he denied there had been any breaches of it. Nor had there been any violation of the international safeguards accepted by member-countries of the IAEA as part of their treaty obligations. "To that extent it has enjoyed a decade of success," he added.

Without referring to India's charge, the U.K. delegate said, "The dangers of proliferation would continue to be with us. The commitment by the parties to the NPT is the most important single barrier to the spread of nuclear weapons."

He said his country wanted the international nuclear fuel cycle evaluation (INFCE) subject to cover reliability in supplies of nuclear material and equipment.

"There is a need to examine further the requirement for short and medium-term mechanisms to ensure the availability of nuclear material in the event of delays or cut-off in supplies."

In this connection, Britain welcomed the IAEA's Director-General's proposal that a committee should be set up by the board of governors to explore these issues.

The Soviet chief delegate, Mr Ivan Morozov said his country would guarantee uninterrupted supply of nuclear fuel and take care of the waste storage for countries going in for nuclear power plants with Soviet assistance.

In an obvious reference to the criticism voiced by some developing countries against certain nuclear powers withholding fuel, he promised Soviet help in other countries' nuclear power programmes.

The Soviet delegate said his country would take back and store all the nuclear waste from the consumer countries. It continued to promote the peaceful use of nuclear energy with utmost regard to safety, he said.

Mr Soilo Bartolome of the Philippines Atomic Energy Commission gave a veiled threat that his country would be forced to develop "individually or jointly" fuel cycles leading to weapons grade material if the U.S. failed to export a nuclear plant for which a contract was signed "several years ago."

Without naming the U.S., with which it had signed a contract, the Philippine delegate said the delay in export of the plant had cost the country \$500 millions in one year.

Mr Bartolome said the supplier country had unilaterally changed the conditions for supply, violating the "existing international treaties and agreements."

If supply assurances were not restored, "countries will attempt to develop individually or jointly, without safeguards, their indigenous fuel cycles leading to greater success to weapons grade material," he said.

The Philippine delegate told the conference that his country had been a beneficiary of India's cooperation in the nuclear field. It was proud of India attaining a high level of technology in the peaceful uses of nuclear energy.

This achievement had been made more meaningful by India's continuing willingness to share this technology with other developing countries, he added.

The Polish delegate expressed concern over the "danger of proliferation of weapons," which had increased. He deplored that the NPT had not been applied by these quarters.

He stressed the need for ensuring greater safeguards so that the technical assistance provided by IAEA was not used for military purposes.

The Canadian delegate, Mr Maurice Copithorne, told the conference that there would be no export of Canadian nuclear knowhow and material to countries which did not accept international inspection of all nuclear installations.

Public opinion in his country would not support a viable nuclear industry unless there was assurance that exports would not be diverted for non-peaceful ends, he added.

Australia suggested greater cooperation among the Asian nations and assured his country's help in training nuclear technicians.

The Australian delegate detailed his country's efforts at developing uranium mines and promised supply of the ore with adequate safety agreements.--PTI and UNI.

CSO: 5100

NUCLEAR ENERGY DEVELOPMENT ISSUES

Madras THE HINDU in English 6 Dec 79 p 8

[Editorial]

[Text] The prime minister's address to the 23rd session of the general conference of the International Atomic Energy Agency (IAEA) has performed a worthwhile service in clarifying the Government of India's stand and developing policies on the controversial and tricky issues of nuclear energy development and firmly correcting the distortions and items of confusion that had crept in during the stewardship of Mr Morarji Desai. It might appear that the latest observations are not very different from Mr Charan Singh's forthright statement of nuclear policy from the ramparts of the Red Fort on Independence Day, but the present address is really distinctive for its constructive criticism of the inequity, the ineffectiveness and the lop-sided emphasis that have characterised the role of the IAEA vis-a-vis nuclear energy development on a world scale. The Prime Minister's main contention—even while he reiterated the commitment to the peaceful use of nuclear energy and to the larger goal of disarmament and checking the nuclear weapons race—is unchallengeable: Whereas not one significant step has been taken to slow down (let alone stop or reverse) the dangerous stockpiling of nuclear weapons within the charmed circle and especially by the superpowers, an inequitable global atomic energy order is sought to be imposed on the developing countries—with the IAEA displaying an increasingly restrictive, as opposed to a constructively promotional, approach. Mr Charan Singh, in fact, hit the head of the nail rather well when he remarked that "safeguards have become more important than technical assistance" and demanded concrete steps to remove the block to developing nations harnessing nuclear energy to a variety of peaceful ends.

In contrast to the content and spirit of Mr Charan Singh's address stood the lengthy statement made by the IAEA's Director-General, Dr Wigvard Eklund, before the inaugural session. The thrust of the latter's line was, predictably, behind the current enforcement of the concept of "nuclear nonproliferation" and also behind the inequitable "safeguards." Dr Eklund's glorying in the formal number of 111 countries signing the Non-Proliferation Treaty (NPT), his declaration that "where NPT and IAEA

safeguards ends, the danger of proliferation begins," his prescription for bringing the entire business of nuclear fuel and equipment supplies under "adequate safeguards" and his somewhat transparent tilt towards the nuclear power priorities of the developed countries are at sharp variance with India's atomic energy development policies and, presumably, with the approaches of some other developing countries. At any rate, apart from being vulnerable to the criticisms and reservations voiced by Mr Charan Singh, these policy positions do not ensure in any practical way that there will be no further spread of nuclear weapons capability--through the collusion of certain powerful developed countries--to forces that represent a vicious menace to regional (if not global) peace, such as the South African racists and the Israeli hawks.

The nuclear weapons club and IAEA general conferences aside, the focus at this point so far as India is concerned should urgently shift to a critical, scientifically oriented assessment of where the country has arrived as a substantive power in the field and what are the specific weaknesses and bottlenecks--apart from the demonstrated advantages, especially in terms of a highly talented science and technology expert force. Only a rigorous exercise will permit the working out of progressive directions for the future in an area that is certainly no soft option. The "Outlook" discussion on the future of nuclear science in India organised by THE HINDU (issue of December 3, 1979) has provided some significant preliminary assessments and insights that policy-makers would do well to take seriously. The significance of the discussion appears to lie in the fact that some of the country's most distinguished nuclear scientists have frankly and straightforwardly underlined the advantages as well as the weaknesses and gaps that have surfaced in so vital a field. They have reiterated the valuable contribution that nuclear power is expected to make towards meeting India's rising energy requirements--with the man in charge of executing all the atomic energy power projects in the country, Dr M. R. Srinivasan, pinpointing a slowing down of the rate of installation on account of clearly avoidable reasons. The participants have attempted also to dispel the depression and confusion in the popular mind caused by the planned misinformation--usually originating in the Western world--about the safety of nuclear power generation, especially through using the fast breeder reactor. While the triggerer of the discussion, Dr Raja Ramanna, explicitly recognised that the 1974 Peaceful Nuclear Explosion (PNE) at Pokhran was a "great success" which has, however, lacked an adequate study and follow-up, another veteran in the field, Dr A. K. Ganguly, pointed out that Indian science and technology was not really being consulted on the issue, that the area was suffering from a "political twist," and that "as far as PNE experiments are concerned, my conviction is that just doing one experiment and stopping is a folly." There has also emerged some kind of scientific consensus through the discussion around the point that what is being done today is far from enough--with the problems of resting on one's laurels, obsolescence and perhaps even a relative falling behind confronting a country with

such outstanding talent. Dr P. K. Iyengar, Director of the Physics Group at the Bhabha Atomic Research Centre (BARC) who, along with Dr Ramanna, made a brilliant contribution towards Pokhran, made an important point in the discussion when he stressed the need to plan concretely and more boldly for the nuclear fields of the future, at both the basic and applied levels. The spirit of constructive scientific discussion was certainly caught by Dr Raja Ramanna when he acknowledged that, given the impressive ground India has covered in nuclear science since Independence, there has been an unmistakable weakening of the "spirit" of vigorous, self-reliant progress from the days Dr Homi Bhabha spoke about it in inspired terms. Whoever assumes office after the tumult and uncertainty of the January elections is obliged to take these expert assessments, feelings and policy recommendations seriously.

CSO: 5100

INDIA

FRENCH TERMS FOR SUPPLY OF N-FUEL

Madras THE HINDU in English 9 Dec 79 p 1

[Text] New Delhi, Dec. 8. French fuel for the fast breeder reactor at Kalpakkam (Madras) is conditional on India's acceptance of the price of the fuel and its readiness to conclude a safeguard agreement, French Government sources told PTI.

These twin issues, discussed in the past, are again under discussion between India and a high-level French delegation now in New Delhi to attend the International Atomic Energy Agency conference.

The FBTR originally expected to be commissioned this year, had been delayed, among other reasons, due to nonarrival of French fuel.

Based on French design, FBTR requires some 300 kg of highly enriched (80 percent) uranium. The Tarapur reactors need only three percent enriched uranium.

French delegation sources said India could have gone through with the deal in 1976 when the fuel price was low. In the last three years the price of enriched uranium had increased, and France is awaiting India's acceptance of the price fixed by the French firm which is not under Government control.

The sources said once the commercial contract was signed, a safeguard agreement could be concluded. "The two things are tied up."

France is still sticking to its original proposal for a bilateral agreement on safeguards, but the sources did not rule out possible international pressure for stricter safeguards.--PTI.

CSO: 5100

JAPAN

NUCLEAR REACTOR LEAKS SMALL AMOUNT OF COOLANT

Genkai Plant of Kyushu Electric

OW060014 Tokyo KYODO in English 0009 GMT 6 Dec '79 OW

[Text] Tokyo Dec 6 KYODO--A small amount of primary cooling water leaked out from the pipe of a pressurized water reactor of the Genkai plant of Kyushu Electric Power Co Wednesday and flowed into the tank of the pressure vessel, according to reports received the same night by the Natural Resources and Energy Agency. The reports said, however, that the operation of the reactor was being continued since there was no danger of radioactivity leaking outside.

The accident involving the 559,000-kilowatt reactor occurred when workers were making adjustments to the coolant pump shield. When alterations were made to the pressure of the primary coolant system, one of the two valves did not function. As a result, the main valve was shut.

During the period, a small amount of primary coolant water leaked out and flowed into the pressurized pressure vessel tank. The Natural Resources and Energy Agency plans to report the accident to the Nuclear Safety Commission Thursday. Kyushu Electric Power Company plans to repair the bad pressure vessel valve when periodic checks are conducted next March.

Accident Not Promptly Reported

OW060355 Tokyo KYODO in English 0327 GMT 6 Dec 79 OW

[Text] Saga Dec 6 KYODO--Some 300 liters of coolant water containing radioactive elements leaked inside the primary containment vessel of the no 1 pressurized water reactor at the Genkai nuclear power plant of Kyushu Electric Power Co in Genkai, Saga Prefecture, last Monday. The accident, which occurred because of trouble with one of the two pressurizer relief valves within the vessel, was reported two days later on Wednesday to the Natural Resources and Energy Agency by the electric power company. Local residents have expressed anger at the delay in reporting the accident, which comes at a time when arguments are being raised over the safety of nuclear power plants in the wake of the Three Mile Island accident in the U.S. last spring.

Officials of Kyushu Electric Power Company said that they did not report the accident until Wednesday afternoon because the leakage was confined to within the container vessel and because there were no fears of radioactivity escaping outside. They said operation of the 559,000-kilowatt capacity reactor continued. The officials said the leakage of the primary coolant water was discovered Monday afternoon when pressure of the water was being adjusted to repair a bad portion of the coolant pump shield.

At that time, the warning bell attached to one of the pressurizer relief valves sounded and the valve opened for some three seconds. As a result, the officials said some 500 liters of the primary coolant water leaked into the pressure vessel tank. The valve closed automatically, but it was found later that a foreign object had become stuck to the valve. The officials said operation of the reactor was continued with the use of the other normal valve.

Local authorities, including officials of the Saga prefectural government, were informed of the accident late Wednesday night, or more than seven hours after it was reported to the Natural Resources and Energy Agency. The prefectural government said it would lodge a protest with the power company Friday on the delay in reporting the accident.

CSO: 5100

JAPAN

COMMISSION TO HOLD HEARINGS ON CONSTRUCTION OF REACTORS

OW110054 Tokyo KYODO in English 0040 GMT 11 Dec 79 OW

[Text] Tokyo Dec 11 KYODO--The Nuclear Safety Commission (NSC) will hold a public hearing on January 17 on the planned construction of two new nuclear reactors in Fukui Prefecture. The hearing is the first to be held by the commission since it was formed late last year.

NSC said the one-day hearing at the municipal center at Takahama, Fukui Prefecture, will concern the planned installation of two 870,000 kilowatt, pressurized water-type nuclear generators at Kansai Electric Power Co's nuclear power station in the town facing the Japan Sea.

In the hearing which NSC characterizes as a dialogue, the Ministry of International Trade and Industry will explain its own examination on the safety of the new reactors, and selected townsmen will be free to question about it, according to NSC officials.

Those allowed to state their views will be limited, however, to the people aged over 20 who have lived in the towns of Takahama and Oi or cities of Maizuru and Ayabe for more than three months and who have been nominated by NSC. Observers must have similar qualifications, NSC said.

It said the questioners are required to mail their views in advance to NSC, and the observers to apply to the Science and Technology Agency by December 26, for permission to attend.

Since the hearing is planned only for a day, the number of those allowed to attend will be limited to 165 and questions limited to problems related to the localities concerned, such as the construction site, NSC officials said.

CSO: 5100

JAPAN

BRIEFS

OPERATION PLANT SUSPENDED--Tokyo Dec 7 KYODO--Operation of the No 1 pressurized water reactor at the Genkai nuclear powerplant of Kyushu Electric Power Co in Genkai, Saga Prefecture, will be suspended to repair a faulty pressurizer relief valve within the reactor's primary containment vessel. This was reported to the Nuclear Safety Commission late Thursday night by the Natural Resources and Energy Agency. As a result, the 559,000-kilowatt reactor is expected to be shut down for about a week until repairs are completed. [Excerpt] [OW070033 Tokyo KYODO in English 0011 GMT 7 Dec 79 OW]

NUCLEAR POWERPLANT--Fukui, Dec 5--Kansai Electric Power Co's Oi nuclear powerplant No 2 reactor in Fukui Prefecture became operational Wednesday about three years behind schedule. Passing the final checkup by the International Trade and Industry Ministry (MIT), the pressurized water reactor, capable of generating 1,175,000 kilowatts of electricity, was put into commercial operation at 4:30 pm. The reactor, featuring a small container vessel, is the ninth in Fukui Prefecture. With this reactor in operation, the electric power company will produce 5,668,000 kilowatts of electricity, accounting for 24.5 percent of the company's aggregate electricity generated. The reactor was completed at a cost of yen 120 million. Its construction began in November 1972. The reactor entered its final adjustment period last November 4 and came into full-capacity operation at 5 am Wednesday for MITI's final checkup. [Tokyo KYODO in English 1020 GMT 5 Dec 79 OW]

CSO: 5100

PAKISTAN

PRESIDENT HAQ ON DEVELOPING NUCLEAR TECHNOLOGY

BKD81350 Karachi Domestic Service in English 1005 GMT 8 Dec 79 BK

[Text] The president, General Mohammad Ziaul Haq, has said that Pakistan wants to acquire nuclear technology for peaceful purposes and no power on earth can deny them its right.

He was inaugurating the 6-day twin international symposium on new researches in biology and genetics and the International Conference of the History and Philosophy of Science in Islamabad this morning.

The president said that certain developed countries are unhappy with the small atomic research program of Pakistan because they want to maintain their monopoly over nuclear technology and do not want to share it with others on the plea that its acquisition by them might jeopardize international peace. The president emphasized that if the apprehensions of the developed countries are dictated by their own interests, our determination reflects the national aspiration, and by the grace of God we shall continue to try to acquire nuclear technology for peaceful purposes according to our national aspirations, and, inshallah (God willing), we shall succeed in achieving it. He said it is not only the question of Pakistan's independence and sovereignty but it involved moral principles of international importance.

The president emphasized that although in general terms the present scientific progress is the product of modern European civilization, but they can trace its origin to Islamic civilization. The president cautioned that [word indistinct] misuse of national resources with rising process of population can prove fatal to mankind. He emphasized that it was the duty of the present generation to safeguard the planet from danger caused by human activities and pave the way for utilizing its resources economically and judiciously. He said he was confident that scientists concerned with biological fields responded to this aspect while considering the relationship between man and the nature.

The president emphasized that if the present know-how is suitably utilized, then the food problem of this century could be solved. Pakistan recently evolved a new variety of rice and wheat with higher yields. He said the situation demands that we should pay full attention to the maintenance of farms and crops, evolve new seeds, breed cattle and make full use of fertilizers and insecticides in order to strike a balance between resources and population.

The president announced that the Quaid-e-Azam university, which had lost its real objectives, is being reverted to its original role of higher scientific learning. He also gave approval to the setting up of a national council of scientists and the holding in Pakistan of an international conference on 1400 years of Islamic science in 1982.

A message from the director general of UNESCO appreciating Pakistan's potentials in the field of science was read out in the twin conferences.

CSO: 5100

OVER RS 47M FOR URANIUM EXPLORATION

Karachi MORNING NEWS in English 19 Dec 79 p 1

[Excerpt] Islamabad, Dec. 18: The Executive Committee of the National Economic Council, which met here today under the chairmanship of Federal Finance Minister Ghulam Ishaq, approved implementation of third phase of the uranium resources exploration project in the district of D. G. Khan, involving a capital cost of Rs 47.908 million with a foreign exchange component of Rs 17.039 million.

The Pakistan Atomic Energy Commission, which has prepared the scheme, will undertake the exploration work.

The project which is to be completed by June 1981, provides for carrying out 3,50,000 feet of drilling and 1500 sq miles of geological mapping, besides construction of access roads and buildings. [as published] The project also envisages delineating the favourable geological hosting uranium, radiometric bore hole logging and mineralogical and chemical studies.

Approval was also accorded to the nuclear mineral survey project (phase II), involving capital cost of Rs 97.615 million with a foreign exchange component of Rs 37.42 million.

The survey scheme, prepared by the Pakistan Atomic Energy Commission, aims at intensifying surveys for the exploration of nuclear minerals in geologically favourable areas throughout the country.

The scheme which is to be completed by 1980-81, entails geological mapping, surveys, drilling, tunneling and laboratory investigations.

CSO: 5107

BRIEFS

NUCLEAR POWERPLANTS—Taipei, Dec 3—The Taiwan Power Co will have built 10 nuclear powerplants before the end of this century, an informed source said Saturday. He said the 10 plants will have 24 generators with a combined capacity of 24.94 million kilowatts. The source said that the company is carrying out a long-term nuclear power development program in three stages. The first stage, which is already under way, will be completed in 1985. Three nuclear powerplants with a total power generation capacity of more than 5 million kilowatts will be completed before May, 1985. The second-stage project will be completed in 1993. Under this project, three nuclear powerplants will be built with 6 generators, producing a total of some 7 million kilowatts. A total of 12 generators will be installed in four plants in the third and last stage of the program. Each generator will have a capacity of 1.2 million kilowatts. The last stage work will be completed before 2,000, the source said. [Taipei CNA in English 1338 GMT 8 Dec 79 OW]

CSO: 5100

INTERNATIONAL AFFAIRS

USSR-CZECHOSLOVAKIA PROTOCOL ON NUCLEAR ENGINEERING COOPERATION SIGNED

AU300912 Prague RUDE PRAVO in Czech 24 Nov 79 p 2 ad

[Text] Ostrava, 23 November, CTK--Th: 5-day eight session of the permanent CSSR-USSR Working Group for Energy Engineering ended in Ostrava on Friday with the signing of a protocol on technical and production cooperation in the manufacture of equipment and in the construction of nuclear powerplants of the VVER-440 type and on common procedure in the preproduction states of the construction of nuclear powerplants of the VVER-1000 type in the Soviet Union, Czechoslovakia and the other CEMA countries.

During joint negotiations, the two groups agreed on further cooperation in production of equipment for conventional power engineering and components for nuclear powerplants. Soviet deliveries of welding material for preproduction stages of power engineering equipment for the VVER-1000 nuclear powerplants are involved. At the same time, a list of subjects for economic and scientific-technical cooperation for the 1980-85 period was discussed and approved.

Czechoslovak and Soviet experts visited the Klement Gottwald Iron and Engineering Works Sectoral Enterprise in Vitkovice and Skoda Plzen, where they inspected workshops specializing in the manufacture of power engineering equipment.

CSO: 5100

INTER-AMERICAN AFFAIRS

BRIEFS

CHILE-URUGUAY NUCLEAR AGREEMENT--Chile and Uruguay have made official the agreement on the peaceful use of nuclear energy. The agreement was signed in Santiago, Chile on 19 July, seeking the exchange of know-how and experiments on this matter between Chilean and Uruguayan scientists. The decree released by the foreign minister was published in the OFFICIAL GAZETTE. It carries the signature of the president of the republic and of the members of the government military junta. [Text] [PY112015 Santiago Chile Domestic Service in Spanish 1630 GMT 11 Dec 79 PY]

CSO: 5100

URANIUM RESERVES RANKED FIFTH LARGEST IN WORLD

Rio de Janeiro O GLOBO in Portuguese 28 Dec 79 p 22

[Text] John Albuquerque Forman, director of NUCLEBRAS [Brazilian Nuclear Corporations] Research and Mining, reported yesterday that Brazil now has the fifth largest uranium reserves in the world: 215,300 tons. Last year reserves totalled 142,000 tons, which placed the country in sixth place behind Nigeria.

The largest concentration of uranium in the country is found in Ceara, in the locality of Itataia, where 122,500 tons are located. According to Foreman, the possibilities of increasing those reserves are great because there are 12 areas still to be investigated in the region. Present reserves could fuel 40 powerplants of the Angra II type throughout their useful life.

He stated that new areas in Itataia and Lagoa Real (Bahia) will be explored "although in a modest manner because the budget is very limited." The money for uranium research comes from the Single Tax on fuels and lubricants and from Item "I" of the price structure for petroleum byproducts.

Research performed exclusively by NUCLEBRAS showed a high degree of improvement, however, the same does not apply to NUCLEBRAS Mining Assistance, Inc. (NUCLAM), where 51 percent of its capital comes from NUCLEBRAS and the rest from Urangesellsohaf of West Germany. That company began its work in 1976, practically at the same time that NUCLEBRAS began its private prospecting, and up to now has discovered 10,000 tons of uranium. Of those finds, Germany has the choice of purchasing up to 20 percent at market prices.

According to John Forman, the first fuel reloading of Angra I, which could go into operation at the end of next year, will be done with Brazilian uranium, which will be concentrated by the Poco de Caldas plant and enriched by URENCO of West Germany.

The NUCLEBRAS director refused to comment on subjects in the nuclear area which go beyond his area of influence, that of research and mining. Questioned on the possibility of uranium exports, he replied: "That is a subject for His Excellency, the minister of mines and energy."

The reserves which are larger than those of Brazil are: United States (1,481,000 tons); Canada (579,000 tons); South Africa and Australia (340,000 tons). Brazilian reserves are distributed as follows:

Reserves	Measured and indicated	Probable	Total
1. Pocos de Caldas-MG	20,000	8,800	28,800
2. Figueira-PR	7,000	1,000	8,000
3. Ferriferous Quadrilateral-MG	5,000	10,000	15,000
4. Amoriopolis-GO	2,000	3,000	5,000
5. Campos Belos-GO	500	500	1,000
6. Itataia-CE	83,000	39,500	122,500
7. Lagoa Real-BA C	3,500	23,500	27,000
8. Espinharas-PB (NUCLAM)	5,000	5,000	10,000
TOTAL	126,000	89,300	215,300

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CSO: 5100

BRAZIL

ARGENTINE DIPLOMATIC SOURCES OPTIMISTIC ON NUCLEAR ACCORD

Admiral To Visit

Sao Paulo O ESTADO DE SAO PAULO In Portuguese 20 Dec 79 p 8

[Text] The president of the Argentine National Atomic Energy Commission, Vice Adm Carlos Castro Madero, should visit Brazil in January to examine possible areas of nuclear cooperation between the two countries with Brazilian authorities.

Circles close to the Argentine embassy in Brasilia declared yesterday that in a recent statement the vice admiral declared that collaboration between Brazil and Argentina is a "promising field" and that "it would consolidate a very strong position by Latin America on a world level."

Madero also said, according to the sources, that "the two countries have common goals" and that although they "may be trying to develop an independent nuclear program, each with its own point of view," both are aimed at the same target.

Vice Admiral Madero had been invited to come to Brazil before the end of the year upon his return from a trip to Europe and the Orient. The invitation was made by Ambassador Paulo Nogueira Baptista, president of NUCLEBRAS [Brazilian Nuclear Corporations], but it could not be accepted because Madero had to attend to unpostponable commitments in Buenos Aires upon his return.

Camillion Expresses Optimism

Rio de Janeiro O GLOBO in Portuguese 28 Dec 79 p 21

[Text] Brasilia (O GLOBO)--Argentine Ambassador Oscar Camillion said yesterday in Itamaraty that there is already optimism in the technical area as to the success of a program of Brazilian-Argentine cooperation in the nuclear field to be signed during the visit by President Figueiredo to Buenos Aires on 14, 15 and 16 of next March.

One day after the official announcement on the days on which President Figueiredo will be with his colleague Jorge Rafael Videla, Camillion appeared at Itamaraty to prepare a schedule of bilateral discussions, which will precede the presidential trip, with Minister of Foreign Affairs Saraiva Guerreiro.

Camillion said that as of next month the two Ministries of Foreign Affairs will promote a sequence of meetings so that the various technical sectors of the two countries may discuss the subjects which should be the objectives of the agreements to be signed during the visit by Figueiredo to Buenos Aires.

The Argentine diplomat also revealed the existence of a provisional agenda for the meeting of the presidents from the two countries. He declared, however, that he preferred to maintain the same position as Minister of Foreign Affairs Saraiva Guerreiro, that is, not create any expectations on specific points. According to him, even because of a question of time, the two governments may not arrive at a final agreement on some aspect of exchange and the hasty announcement of a subject on which no agreement is reached could give the impression of failure.

Questioned as to how nuclear cooperation between Brazil and Argentina could take place, since the programs of the two countries are very different, Oscar Camillion said that the important things are the objectives of the two countries, which are similar. He explained that there are possibilities of a complementation between the two programs, for example, in the areas of engineering, exchange of information and the training of personnel.

The secretary general of Itamaraty, Ambassador Joao Clemente Baena Soares, yesterday issued several memorandums to the different departments so that as of January the divisions of the Ministry of Foreign Affairs could begin to work in preparing the extensive presidential agenda in Buenos Aires.

In addition to understandings on the nuclear area, several agreements, pacts and contracts are foreseen in the following areas: imports of petroleum and natural gas surpluses; prospecting for petroleum on the Argentine continental shelf under the system of risk contracts; construction of a hydroelectric plant on the Uruguay River; increase in bilateral trade (\$1.5 billion this year as compared to \$800 million last year); industrial complementation in various fields; tourism and exchange; fishing, iron and steel production, wheat and transportation (construction of a bridge).

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CSO: 5100

POSSIBILITY OF NUCLEAR AGREEMENT WITH IRAQ REVEALED

Nogueira Makes Statement

Sao Paulo O ESTADO DE SAO PAULO in Portuguese 15 Dec 79 p 7

[Text] Ambassador Paulo Nogueira Batista, the president of NUCLEBRAS [Brazilian Nuclear Corporations], declared yesterday that Brazil "is going to find a system of nuclear cooperation with Iraq," although there is no final agreement on the subject as yet. The president of NUCLEBRAS, who was in Iraq in September, added that such cooperation would not mean "a transfer of the technology we are assimilating through the agreement with Germany," but in compensation "Brazil could renegotiate the solutions it has available to it such as in the areas of services and even the transfer of technology we already know, such as mineral prospecting."

Paulo Nogueira Batista also declared that NUCLEBRAS "views with great interest" the possibility of cooperation with Argentina in the nuclear field but he said that no decisions have been made with respect to that country and that "they are the purview of the government." According to him, an agreement between Brazil and Argentina could be beneficial for both countries since each is ahead of the other in certain areas--Argentina already has an operating nuclear powerplant; Brazil, in turn, will soon inaugurate a reactor factory, something Argentina does not have.

In an interview granted prior to the installation of the Technico-Scientific Consultative Commission of the Nuclear Technology Development Center of NUCLEBRAS, Paulo Nogueira Batista also denied that there is a financial crisis in the state company, adding that its budget for the coming year "is already being negotiated" and should be decided upon by the end of the year.

With respect to the uranium reprocessing pilot plant being installed in Belo Horizonte, he said that it will go into operation "in February or March" and will play "an important role in the process of developing the reprocessing technology and in the training of operators for the industrial powerplant, which is being built in Resende in the state of Rio.

The president of NUCLEBRAS declared that the choice of the place for the final storage of nuclear waste resulting from nuclear powerplant operations is a matter for the National Nuclear Energy Commission and not for NUCLEBRAS. According to him, however, there is no type of delay in making the decision on this problem "since this is a matter which does not require an urgent solution because it will be 10 years before it becomes a practical question and several studies on options are being made for arriving at the best solution."

Iraqis Deny Agreement Exists

Rio de Janeiro O GLOBO in Portuguese 19 Dec 79 p 28

[Text] Brasilia (O GLOBO)--Iraqi diplomats yesterday denied the reports by Israeli newspapers that Iraq would have access to the atomic powerplants of Brazil and that through the bilateral nuclear agreement it would obtain the technology France refused to provide up to now despite the fact that it has an agreement with that country.

In the Iraqi embassy there is only one certainty as to the purpose of such reports: Hinder the development of the Brazilian atomic program and hamper the transfer of German technology to Brazil.

Iraqi diplomats recalled the statement by Ambassador Zaid Haidar in a recent press interview in which he said that still unidentified sources are seeking to prejudice future Brazilian-Iraqi relations in the nuclear sector, and the Brazilian-German agreement itself, which forbids the transfer of technology to other countries by Brazil.

German Statement

Rio de Janeiro O GLOBO in Portuguese 19 Dec 79 p 28

[Text] Brasilia (O GLOBO)--"Germany trusts Brazil completely and pays no attention to statements that German nuclear technology will be transferred to Iraq in the future," said the press officer of the German embassy, Berhardt Kutzner, yesterday, referring to the future atomic agreement between the two countries.

Kutzner, however, said that Brazil may transfer nuclear technology to other countries providing that it consults with Germany, thus rebutting the statements that the retransfer of nuclear information by national technicians is prohibited.

Israelis Reveal Agreement

Rio de Janeiro O GLOBO in Portuguese 18 Dec 79 p 23

[Article by Eliezer Strauch: "Israelis Announce Brazil-Iraq Agreement"]

[Text] Jerusalem (O GLOBO)—The Israeli newspapers MAARIV and HAARETZ in their editions yesterday and day before yesterday gave great prominence to the news of the petroleum agreement between Brazil and Iraq. The former publishes extensive material by its correspondent in Rio de Janeiro, emphasizing the economic problems Brazil is confronting as a result of the energy crisis and the efforts being made by the government to insure sources of supply in the Middle East. The correspondent states that up to now there has been no confirmation here of the rumors that Brazil promised to help Iraq in the construction of atomic powerplants and to extend diplomatic recognition to the office of the Palestine Liberation Organization [PLO] in Brasilia. He concluded by quoting an important Brazilian journalist, not identified by name, who allegedly said: "Now, for the finishing touch, all that remains is for Brazil to send troops to fight against Israel at the side of the Iraqis."

HAARETZ, at the top of its front page, quotes French diplomatic sources who allegedly told its correspondent in Paris that Brazil has already committed itself to helping Iraq to develop its atomic power. "This help," writes HAARETZ, "allows Iraq to develop resources that it was not able to obtain through France, which up to now has been its main supplying country for nuclear equipment."

Itamaraty Issues Statement

Rio de Janeiro O GLOBO in Portuguese 18 Dec 79 p 23

[Text] Brasilia (O GLOBO)--Itamaraty spokesman, Bernardo Pericas, said yesterday, with respect to the report disseminated by the Israeli newspaper HAARETZ, that all the nuclear technology Brazil would provide to Iraq and to any other country would be subject to the control of international safeguards.

The Itamaraty spokesman also said that the protocol on nuclear cooperation signed early last October in Baghdad by NUCLEBRAS president Paulo Nogueira Batista includes the transfer of technology for peaceful uses and refers essentially to the training of personnel and uranium prospecting. According to Pericas, all technology to be provided to Iraq and which would not be completely Brazilian, that is, it would be part of the Brazil-Germany agreement, would depend on prior consultations with German authorities.

The spokesman for the Ministry of Foreign Affairs also said that Brazil has a signed policy against the proliferation of nuclear weapons. "Iraq itself is a signatory of the Nuclear Nonproliferation Treaty," he added. Reports such as this one, quoting anonymous sources, are aimed solely at creating controversy, suspicion and doubt. There is nothing hidden or contrary to international law in nuclear cooperation with Iraq.

Weapons

With respect to another part of the report from Jerusalem, the Itamaraty spokesman declared: "There is no ban on the sale of weapons in international legislation unless it is to Rhodesia and South Africa."

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CS0: 5100

BRAZIL

ENERGY MINISTER FORESEES NINE PLANTS IN OPERATION BY 1995

Sao Paulo O ESTADO DE SAO PAULO in Portuguese 27 Dec 79 p 26

[Text] Minister of Mines and Energy Cesar Cals announced yesterday, when he made a report on the work of his ministry in 1979, that the uranium reserves of the country now reach 215,000 tons, of which 126,000 are measured. This means an increase of 11 percent over those of last year when the figures were 73,000 tons measured and 193,800 tons estimated. The increase is due basically to new finds in the Itataia mine in Ceara "which should provide us with pleasant surprises during the entire year of 1980," said the minister.

Without going into details, Cesar Cals revealed that NUCLEN [NUCLEBRAS [Brazilian Nuclear Corporations] Engineering, Inc.] (a subsidiary company of NUCLEBRAS) as well as the KWU [Kraftwerk Union] have decided on the need to reinforce the pilings previously installed at the Angra II powerplant, refusing, however, to state the cost of that operation, which he added, should be concluded in the first half of next year. The minister reiterated his opinion that the nine powerplants stipulated in the Brazilian Nuclear Program should be in operation by 1995.

As Cesar Cals explained, "special attention was devoted to safety regulations and to the licensing of nuclear installations." With respect to the development of techniques for radioisotope production, efforts will be concentrated "in the fields of agriculture, industry, medicine and biology." For the minister, the assurance of the transfer of technology and Brazilian self-sufficiency in the fuel cycle were the main activities of the sector this year. According to Cesar Cals, contracts for all the phases of the nuclear fuel cycle, which had their plans initiated, were determined during the period which is ending, and there was the intensification of the granting of 1,600 scholarships in addition to the activity of 151 experts in Brazil and abroad.

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CSO: 5100

BRAZIL

PAKISTAN SEEKING URANIUM TO REPLACE DISCONTINUED SUPPLIES

Sao Paulo O ESTADO DE SAO PAULO in Portuguese 24 Nov 79 p 25

[Text] Brazil could in the short term export products worth from \$2 billion to \$5 billion to Persian Gulf countries, it was declared yesterday in Curitiba by Pakistani Ambassador Syed Ahmad Hasan Ahsani. Moreover, according to the ambassador, the Gulf countries are investing \$65 billion annually in infrastructure and Brazil could be destined to receive part of those investments. In that respect he mentioned a railway which the Mendes Junior Company is building in Iraq.

The ambassador visited the PETROBRAS [Brazilian Petroleum Corporation] refinery in Araucaria and said that Pakistan is interested in purchasing uranium from Brazil, which is needed for its nuclear program now that Canada discontinued supplies to his country. Pakistan wishes to use nuclear energy solely for peaceful means, he added.

In addition, yesterday the ambassador made a proposition to PETROBRAS in Araucaria for the creation of a joint-venture with the state company for the production of urea from natural gas. There is a plant at Araucaria which produces ammonia and urea as a byproduct of petroleum refining.

Pakistan is creating a free trade zone in Karachi and is prepared to open 100 percent of that area to Brazil, area from which exports to the entire gulf area could be made. In the free zone, he explained, factories and warehouses could be installed for attending to the demand for urea, methane, buses, trucks, elevators, guarana, orange juice and other products.

Brazilian companies could also recruit workers in Pakistan and the ambassador recalled that the Mendes Junior Company has already employed 15,000 Pakistanis in the construction of the railway in Iraq, among them engineers, technicians and welders. He concluded by saying that Brazilian exports to Pakistan should go from \$50 million to \$30 million [as published].

CHILE

BRIEFS

URANIUM PLANT IN CHUQUICAMATA MINE--Antogagasta, Chile, 12 Dec (LATIN)--
The Chilean Nuclear Energy Commission today announced the creation of a uranium plant in the Chuquicamata coppermine which will yield approximately 40 tons annually during its initial stage of operation. Rolando Soto, acting executive director of the commission, reported that the basic engineering studies will start in the first half of next year. He noted that the uranium exploitation project was initiated when the commission put into motion a national plan for radioactive resources aimed at assessing the country's uranium deposits. He said: "We have proved that there is uranium oxide in Chuquicamata and that it is possible to recover it from copper at an economic cost which makes its exploitation absolutely profitable." He added that the commission had signed an agreement with the Copper Corporation (CODELCO), owner of the Chuquicamata mines, to exploit the uranium. [Text] [PY130141 Buenos Aires LATIN in Spanish 0000 GMf 13 Dec 79 PY]

CSO: 5100

BRIEFS

NUCLEAR ENERGY FOR ELECTRICITY--Cuba will use nuclear energy as a source of electricity, Paulino Alvarez, official of our country's Ministry of Electric Power Industry, has announced in a speech at the 15th meeting of the Central Committee of the Commission for Regional Electric Integration--CIER--in Lima, Peru. Alvarez pointed out that Cuba needs nuclear energy to reduce the high cost of supplying electric power to the population. He also said that Cuba is developing a broad program of total electrification which will cover 95 percent of the countryside before the century ends. Alvarez added that the development of electrification is part of the economic and social objectives established by the socialist state in the national development plan. [Text] [FL051258 Havana Domestic Service in Spanish 1100 GMT 5 Dec 79 FL]

CSO: 5100

RESEARCH INSTITUTE DIRECTOR INTERVIEWED ON NUCLEAR SAFETY

LDO41255 Paris L'HUMANITE in French 27 Nov 79 p 8 LD

[Article by Jean George: "Research Into Safety"]

[Text] Moscow, 25 November--Soviet experts think that the accident at the U.S. nuclear power station at Three Mile Island last March definitely proves that these installations have very sound safety systems.

"The accident was serious and yet there were no reports of casualties or damage to the environment."

This paradoxical opinion was expressed by Vladimir Tsikanov, director of the Scientific Research Institute of Atomic Reactors located in Dmitrovgrad, some 100 km east of Ulyanovsk in the Volga. I questioned him on safety at Soviet installations.

"Our hermetic sealing and cooling system is more extensive than that of American power stations," he added. "Therefore it is true to say that electricity generated by nuclear means is less dangerous for the environment than electricity generated by thermal means."

Yuriy Chechotkin, head of the institute's thermal reactor department told me, for his part: "In the history of nuclear energy in the USSR there have been no breakdowns resulting in atmospheric pollution, only equipment failures."

The statement made by these experts would carry even more weight if information on real accidents and their possible consequences for the staff was more complete. In any case the Dmitrovgrad institute's activities prove that there is a great deal of concern about safety in nuclear power stations in the USSR.

The institute, which was founded 25 years ago, has a fast breeder reactor and a thermal reactor. It studies equipment, safety systems, the recovery of waste and the possibility of using this type of power station for urban heating. "We draw up recommendations for all existing power stations and all power stations under construction," the director explained.

"These are world experiments," he continued, "and we are working in collaboration with French researchers in particular." V. Tsikanov stressed the importance of experiments in the field of heating. "In far-flung areas of the USSR small power stations could supply the hot water vital to urban comfort." Of course he is thinking of all the pioneer cities of Siberia in the Far East and far north of Siberia.

The Dmitrovgrad institute has not had any accidents since its reactors have been operating. It supplies electricity to the city and region of Ulyanovsk. At the moment the hot water is used exclusively by the research center.

FEDERAL REPUBLIC OF GERMANY

SCHMIDT ON NUCLEAR ENERGY

LD041235 Hamburg DPA in German 1035 GMT 4 Dec 79 LD

[Excerpts] Berlin--Federal Chancellor Helmut Schmidt and SED chief Erich Honecker will have talks in the near future. Schmidt stated today at the SPD party conference in Berlin that he had agreed to a "working meeting" with Honecker. The chancellor gave as the timeframe the first months of next year. It also became known from Bonn government circles that a visit by Schmidt to the GDR was possible in February or March.

Schmidt also stated at the party conference that he would accept the Soviet invitation for talks with the Soviet state and party chief Leonid Brezhnev in Moscow in the spring of next year.

The chancellor spoke in detail about the two controversial issues at the party conference and supported the use of nuclear energy and the imminent NATO decision on new medium-range weapons in Western Europe. Schmidt underlined the importance of an energy conservation policy and of domestic coal. Because of the risk of coal [as received] the government was supporting the development of alternative energy sources which, however, could only be technically exploited on a large scale toward the end of the century. "These are the compelling reasons why, for the next few decades at least, we cannot dispense with the limited expansion and use of nuclear energy." The chancellor gave the assurance that the government would continue to take seriously the population's fears about the dangers of nuclear energy and stressed: "Safety has priority." He said that open information for the citizens was a debt that scientists, engineers, politicians and energy concerns had to discharge voluntarily to them. He said that, in a democracy which depended on cooperation, the use of nuclear energy could not in the longrun take place without the broad agreement of public opinion. Schmidt said that the German Trade Union Federation also regarded nuclear energy as indispensable in the light of present knowledge.

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FINLAND

GOVERNMENT HOPES FOR GUARANTEE FROM NUCLEAR POWERS

LD102202 Helsinki Domestic Service in Finnish 1800 GMT 10 Dec 79 LD

[Text] According to Foreign Minister Paavo Vayrynen, Finland hopes that the nuclear powers will guarantee either through unilateral declarations or mutual agreements that no nuclear weapons will be used against nonnuclear countries or that the use of nuclear weapons against them will not be threatened, and that the territory of nonnuclear countries should not be used to bring nuclear weapons to their targets.

These demands are, according to Foreign Minister Paavo Vayrynen, who spoke in Oulu, the least that we must strive for from the standpoint of Finland's interest.

Vayrynen said that even in altered conditions, the fundamental obligations of the YYA treaty [Finnish-Soviet treaty of friendship, cooperation and mutual assistance] have preserved their significance. Finland must be able to defend the inviolability of its territory for an attack on the Soviet Union, Foreign Minister Vayrynen said. According to Vayrynen, the neglect of our defense would mean abandoning the right to speak up for our own affairs and the consequence, at worst, would be being turned into a battle arena between other states and subjected even to nuclear strikes.

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